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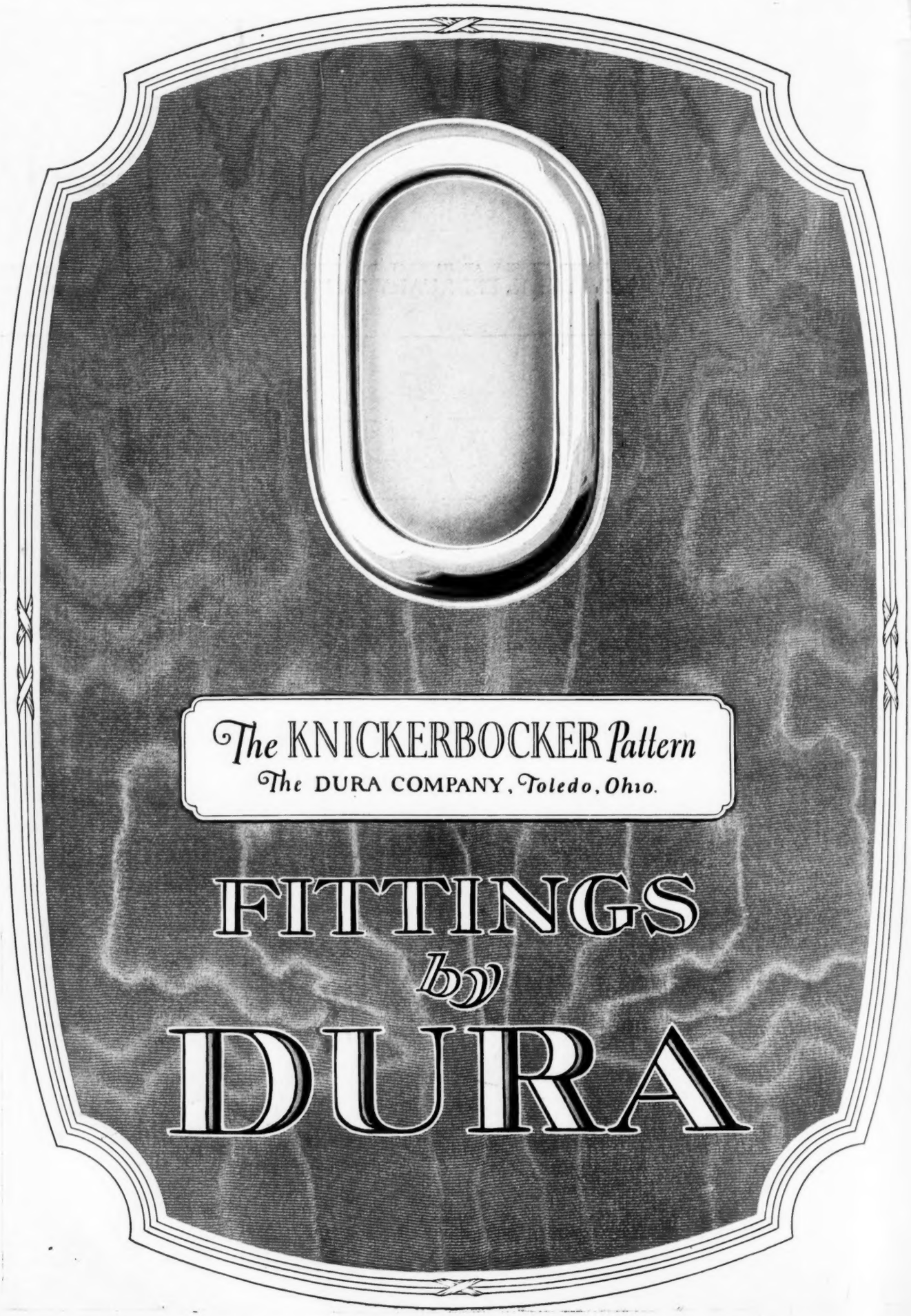
The KNICKERBOCKER Pattern
The DURA COMPANY, Toledo, Ohio.
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AUTOMOTIVE INDUSTRIES
The AUTOMOBILE

VOL. L NEW YORK—THURSDAY, FEBRUARY 21, 1924 No. 8

Cars Selling for Less Than $1,000 81.6 per cent of 1923 Output

Proportion of expensive vehicles decreases despite general prosperity. Truck output higher than ever before. Tires, motorcycles, and tractors increase.

By Raymond B. Prescott

CARS selling for less than $1,000 made up a larger percentage of the record-breaking 1923 production than in any previous year. Of the 3,636,599 passenger cars built last year, 81.6 per cent were in the "under $1,000" class, while 97 per cent of the total sold for less than $2,000. Despite the tremendous numerical increase in production in 1923, fewer cars were sold for more than $2,000 than in 1922.

These outstanding facts are developed by a detailed survey of the 1923 production statistics. Other interesting features are:

1. Truck production continued to grow a little more rapidly, relatively speaking, than did that of passenger cars. This is a normal development, because of the high actual figure already reached in passenger car manufacture.

2. Of all the cars built last year, 32.6 per cent were closed models, and the proportion of closed jobs ran as high as 60 per cent for cars in the "over $4,000 class."

3. Michigan again leads other States in number of cars manufactured, with Ohio a poor second. The standing of the other States also has remained unchanged.

AUTOMOTIVE manufacturers of every kind had a big year in 1923. Production figures in all automotive lines showed marked increases over 1922, but intense competition in certain fields held down profit margins.

Following is the record of 1923 automotive production shown in brief tabular form:

Passenger cars	3,636,599
Trucks	376,257
Tires	40,000,000
Motorcycles	45,000
Tractors	125,000

The drop in high-priced car production is due to the fact that several important lines lowered prices under the $2,000 mark. Contributing factors include reduction in closed car prices, which brought a larger share of certain companies' production into lower price groups, and the failure of one or two prominent high-priced cars to go ahead of their 1922 schedules.

THE percentage of low-priced cars included in 1923 production exceeded that of 1922 by nearly 7 per cent, while the proportion of cars built in the $1,000-$2,000 class dropped off about 5 per cent. Price class figures which are given in accompany tables present a more accurate analysis than has been available before. Data previously used have been revised so that various models of the same make of car now are included in the specific price class in which they are sold. This makes the present figures an accurate gage of buying tendencies.

The proportion of closed jobs built has increased in every price class, 31 per cent of even the lowest-priced cars being closed in 1923. The largest gain in this respect took place in the $1,000-$2,000 group. Manufacturers in this group have given particular attention to the development of cheaper closed bodies during the last few years and the result of their efforts has been reflected in larger sales.

Truck production reached new heights in 1923,

when 376,257 new commercial vehicles were built. This represents a gain of 123,589 over 1921 and surpasses by 54,218 the previous high mark of 316,364 made in 1920. The gain over 1920 was nearly 17 per cent in units manufactured, but wholesale value decreased about 37 per cent.

Production of tires increased materially in 1923, in line with the general increase in use of cars and trucks. High production at the beginning of the year ran up huge inventories and the last half of 1923 was spent in bringing stocks back to normal. Manufacturing schedules were curtailed materially from July to December, with the result that inventories were at a relatively low level as the year closed.

Shipments held steady throughout the year, relatively small variations being noted from month to month. Solid tire production dropped off very materially in the last six months, while shipments declined as well.

The charts giving details of inventories, production and shipments on a monthly basis relate only to activities of members of the Rubber Association of America, whose members built about 75 per cent of the total tire production. The tire chart bearing a single line gives estimated total production for all makers over a period of years.

Passenger Car Production

(Compiled by N. A. C. C.)

	Number	Value
1912	356,000	$335,000,000
1913	461,500	399,902,000
1914	543,679	413,859,379
1915	818,618	565,978,950
1916	1,493,617	797,469,353
1917	1,740,792	1,053,505,781
1918	926,388	801,937,925
1919	1,657,652	1,461,785,925
1920	1,883,158	1,809,170,963
1921	1,514,000	1,093,918,000
1922	2,406,396	1,567,003,041
1923	3,636,599	2,243,385,000

Motorcycle production increased some 15,000 over 1922, the total for 1923 being about 45,000. Fully 50 per cent of the machines built were sold in foreign countries, where business was better than it has been for some years. Two companies made about 80 per cent of all the motorcycles built last year, a condition which has existed for some time past.

Despite a 25 per cent rise in tractor production last year, tractor makers in general continued to experience hard times. Ford built about 101,000 of the 125,000 tractors produced in 1923, while one other large manufacturer is said to have been responsible for another 15,000. While the tractor production figure given necessarily is estimated, it probably is correct within relatively small limits of error.

Foreign manufacturers increased their production schedules last year, although the gains were not to be compared, of course, to the stupendous growth in the United States. French and British makers both built more vehicles than in 1922, the increases recorded being substantial in both cases. Production dropped off slightly in Germany.

Although accurate figures for Canada are not available at the present time, the American factories there shared in the prosperity common to producers in the United States. The very large increase in Canadian registrations and exports last year indicate that the total production for the Dominion ran well over 150,000.

Motor Truck Production

(Compiled by N. A. C. C.)

	Number	Value
1912	22,000	$43,000,000
1913	23,500	44,000,000
1914	25,375	45,098,464
1915	74,000	125,800,000
1916	90,000	157,500,000
1917	128,157	220,982,668
1918	227,250	434,168,992
1919	316,364	423,326,621
1920	322,039	423,756,715
1921	147,550	166,082,000
1922	252,668	222,635,324
1923	376,257	267,500,000

Production of important European manufacturing nations in 1923 was as follows:

France	125,000
Great Britain	78,000
Germany	35,000

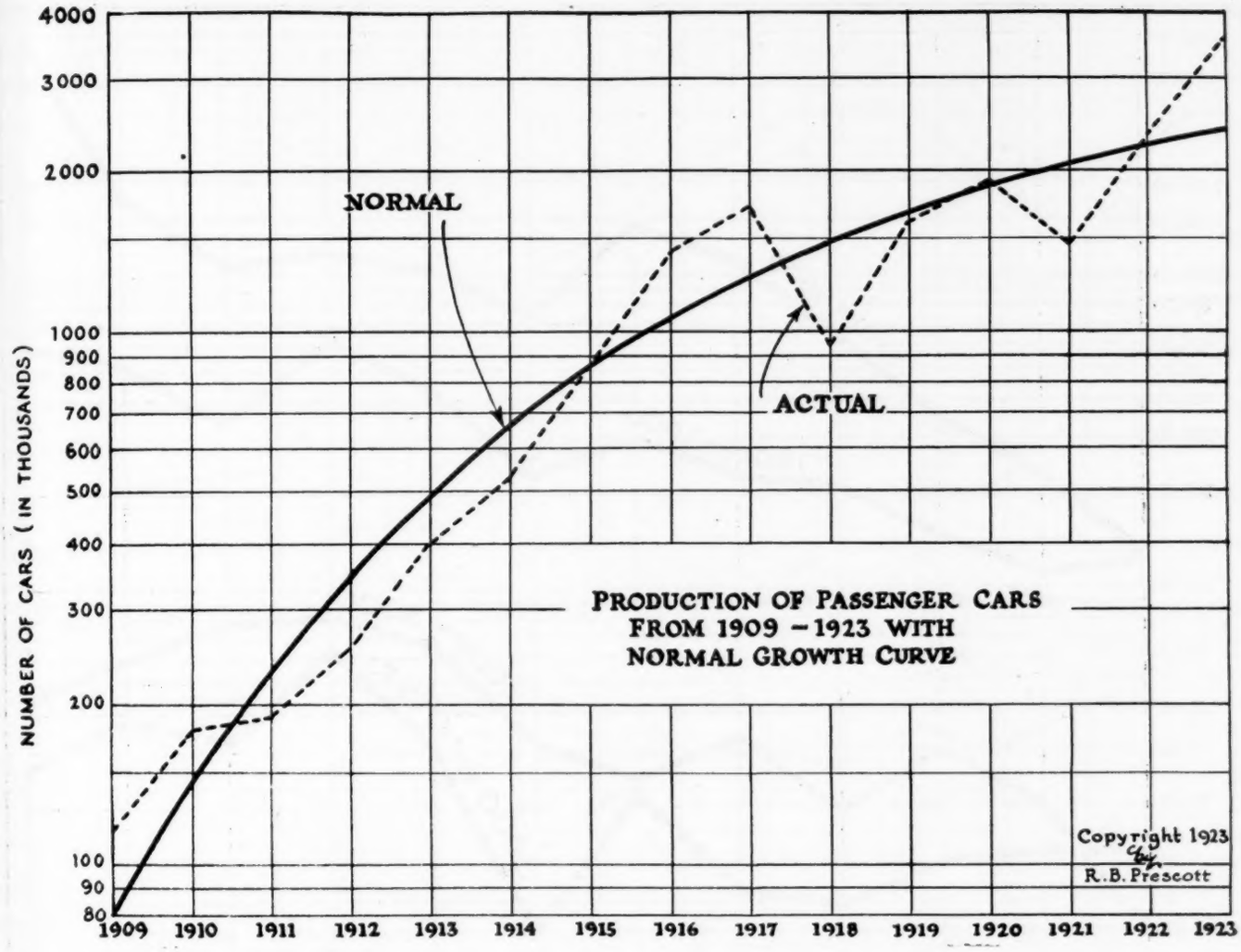
The output of 125,000 passenger cars and trucks estimated for France was produced by 80 factories. Of this 125,000, 30,500 were exported, 90,000 went into service in France, and 4500 may be estimated as the number of cars replacing those thrown on the scrap heap or destroyed by accident.

French automobile manufacturers make no returns of their production to any central body, and while a few of them give information freely, the majority surround their business with a cloak of mystery. Production estimates, therefore, for the most part have to be based on observation checked by official returns for exports and registrations.

The biggest producer undoubtedly is Citroen, whose output for the whole of the year 1923 may be estimated at 34,000 cars, these comprising two models of a nominal

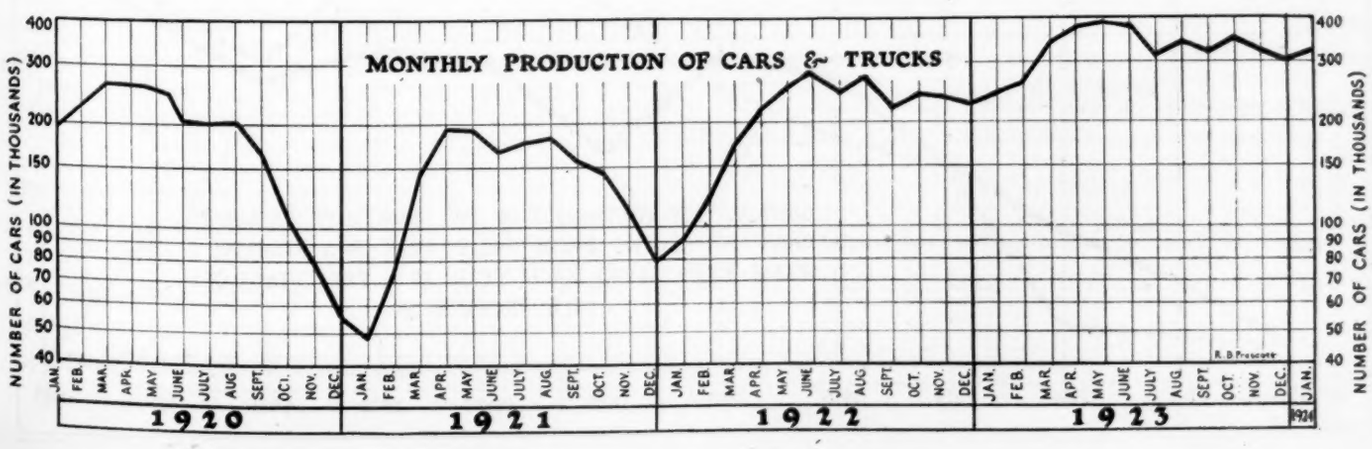
Percentage of Passenger Car Production by Years and Price Classes

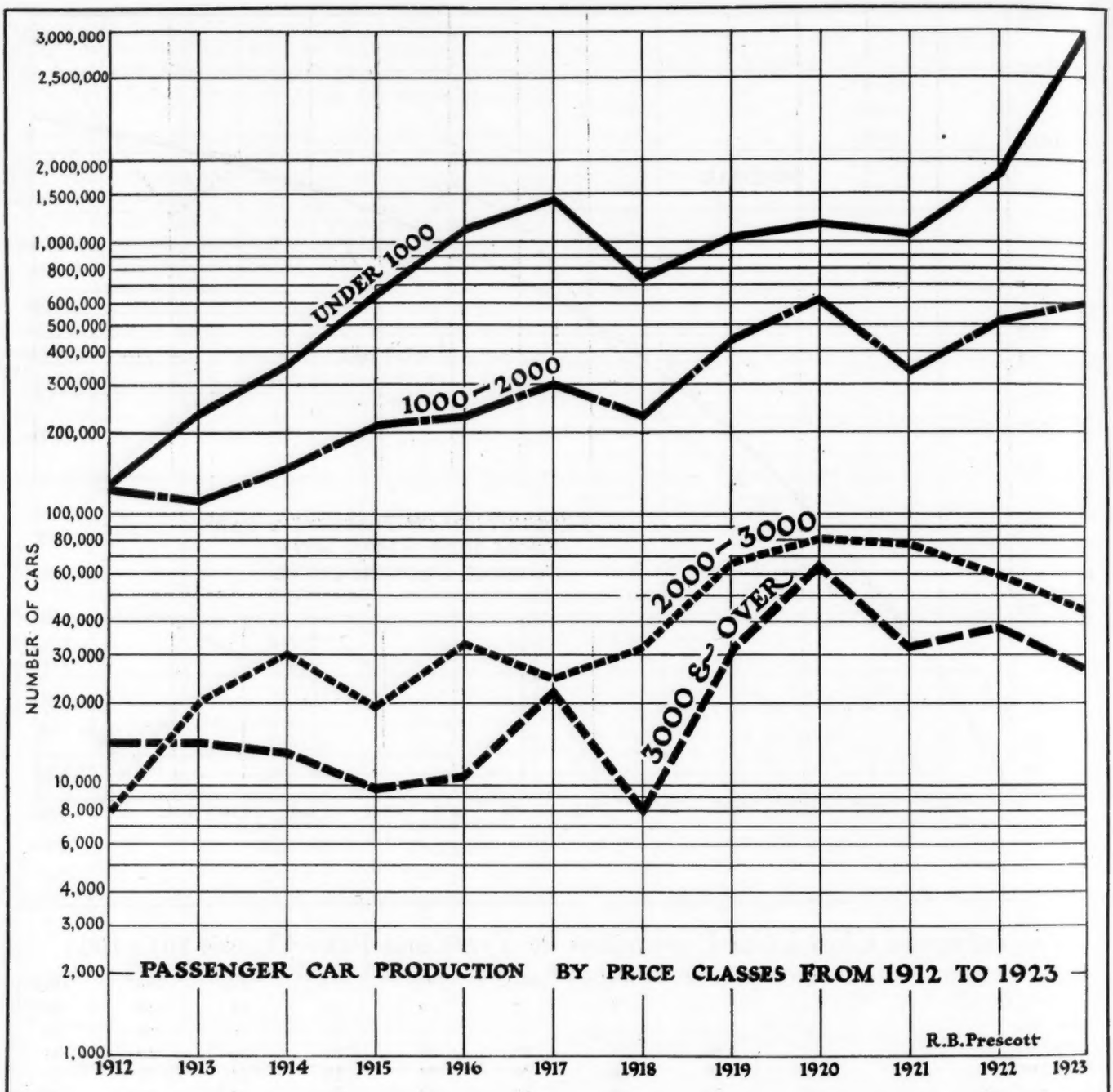
Years	Under $1,000	$1,000 $2,000	$2,000 $3,000	$3,000 and Over
1912	43.8	47.7	2.9	5.6
1913	62.7	28.5	5.0	3.8
1914	62.5	29.5	5.5	2.5
1915	72.3	24.4	2.2	1.1
1916	81.3	15.5	2.4	.8
1917	79.8	17.5	1.5	1.2
1918	71.6	24.2	3.4	.8
1919	58.9	34.9	4.2	2.0
1920	59.4	32.9	4.3	3.4
1921	69.0	23.3	5.4	2.3
1922	74.0	21.8	2.5	1.7
1923	81.6	16.4	1.2	.8

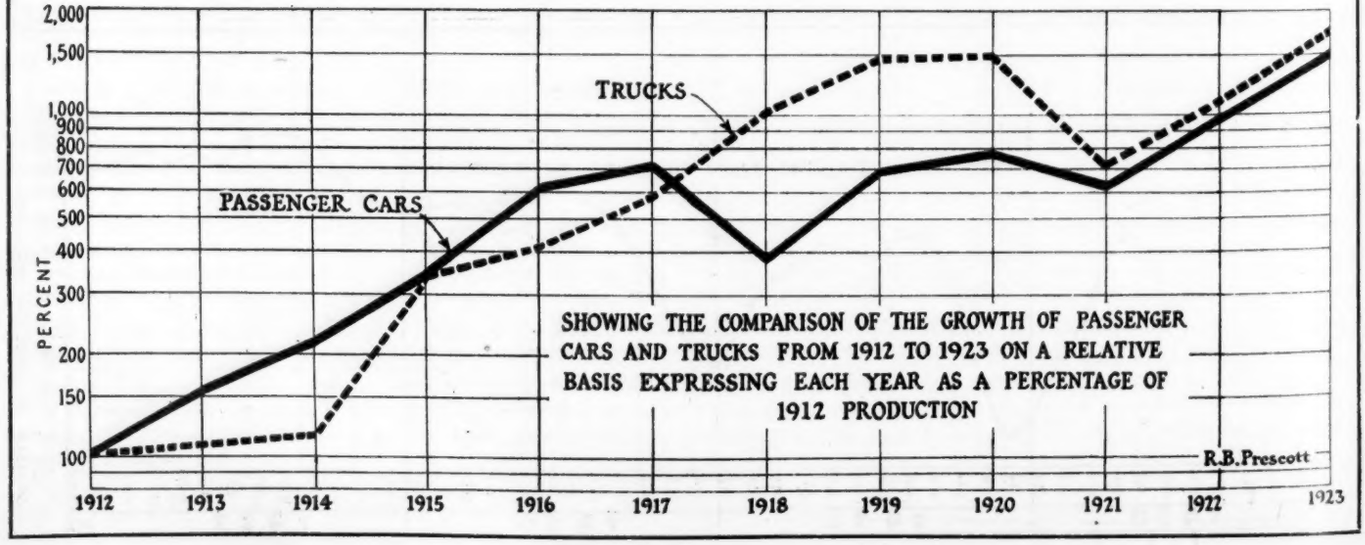


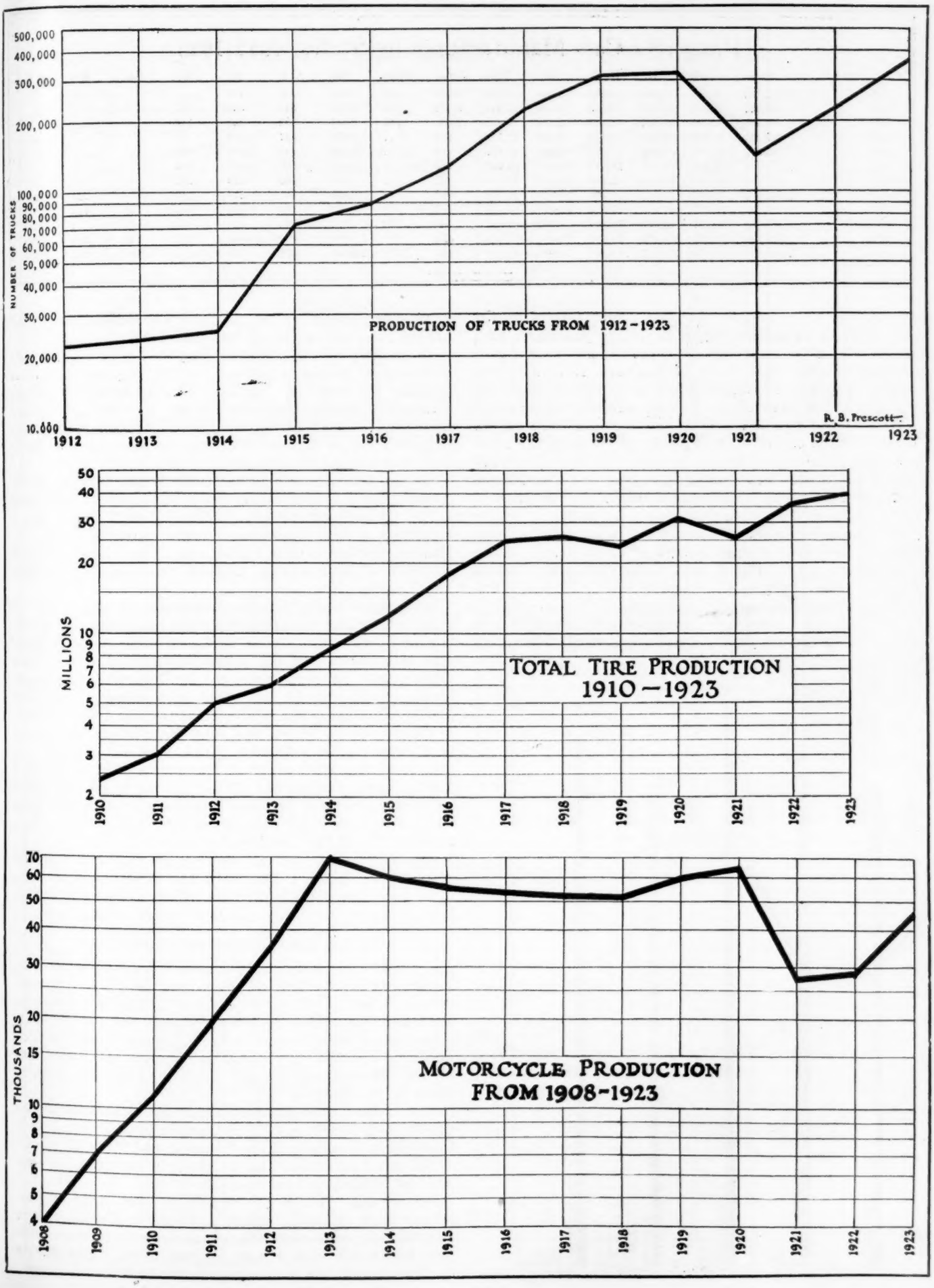
Percentage of Closed Car Production by Years and Price Classes 1915-1923

	1915	1916	1917	1918	1919	1920	1921	1922	1923
Under 1000	1.4	1.4	3	6	9	16	21	26	31
1000-2000	3	4	5	6	8	12	18	29	38
2000-3000	7	10	24	22	24	22	36	39	41
3000-4000	8	10	10	20	27	43	41	44	55
4000 and over	27	37	33	25	27	30	47	56	60




3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
800,000
600,000
500,000
400,000
300,000
200,000
100,000
80,000
60,000
40,000
30,000
20,000
10,000
8,000
6,000
4,000
3,000
2,000
1,000
NUMBER OF CARS
UNDER 1000
1000 – 2000
2000 – 3000
3000 & OVER
1912
1913
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
PASSENGER CAR PRODUCTION BY PRICE CLASSES FROM 1912 TO 1923
R.B.Prescott


2,000
1,500
1,000
900
800
700
600
500
400
300
200
150
100
PERCENT
TRUCKS
PASSENGER CARS
SHOWING THE COMPARISON OF THE GROWTH OF PASSENGER CARS AND TRUCKS FROM 1912 TO 1923 ON A RELATIVE BASIS EXPRESSING EACH YEAR AS A PERCENTAGE OF 1912 PRODUCTION
R.B.Prescott
1912
1913
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923


NUMBER OF TRUCKS
500,000
400,000
300,000
200,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
1912
1913
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
PRODUCTION OF TRUCKS FROM 1912-1923
R. B. Prescott
MILLIONS
50
40
30
20
10
9
8
7
6
5
4
3
2
1910
1911
1912
1913
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
TOTAL TIRE PRODUCTION
1910—1923
THOUSANDS
70
60
50
40
30
20
15
10
9
8
7
6
5
4
1908
1909
1910
1911
1912
1913
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
MOTORCYCLE PRODUCTION
FROM 1908-1923

Passenger Cars Manufactured by States, 1912-1923

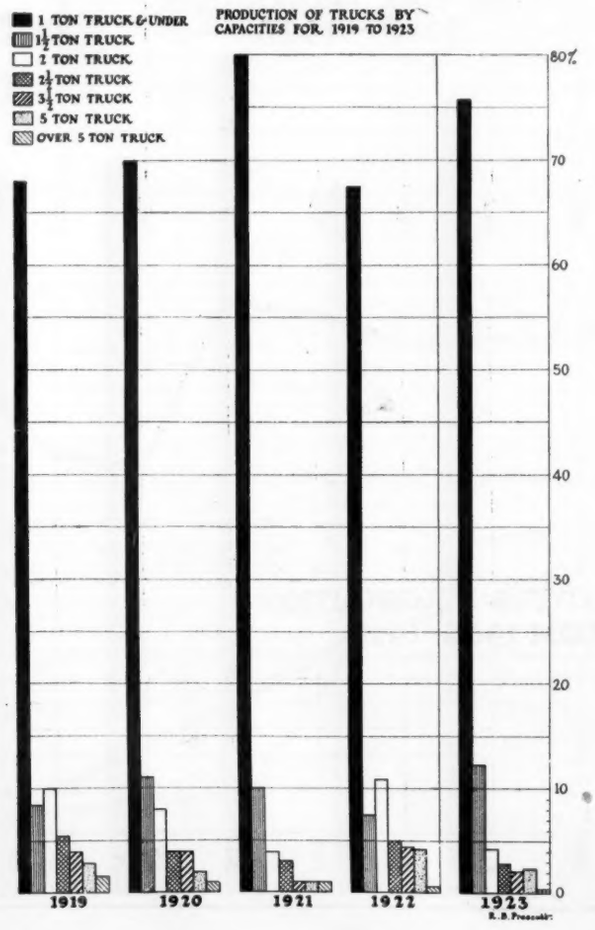
	Mich.	Ind.	Ohio	N. Y.	Ill.	Wis.	Conn.	Mass.	Mo.	N. J.	Pa.	Va.	Ga.	Ky.	S. C.
1912.....	193,307	5,305	32,914	9,653	1,216	11,482	2,016	851	894	375	724	....	....	....	....
1913.....	296,877	8,188	42,901	6,385	3,100	13,541	2,018	721	1,205	573	582	113	....	....	....
1914.....	432,156	7,990	51,637	5,826	2,108	15,551	1,230	591	1,454	502	388	106	....	....	....
1915.....	636,721	17,329	102,562	6,550	3,099	22,795	943	....	1,015	527	4,300	22	....	....	....
1916.....	1,041,971	29,083	156,586	7,153	7,092	41,477	895	....	2,632	740	5,364	119	....	....	....
1917.....	1,341,857	37,918	150,225	12,653	10,975	32,016	762	....	2,067	685	1,574	205	....	....	....
1918.....	671,943	21,561	97,343	8,066	10,111	24,234	370	....	1,464	360	415	191	....	....	....
1919.....	1,344,346	34,557	94,661	11,659	14,292	49,150	484	....	1,930	583	875	269	....	249	751
1920.....	1,488,707	39,837	142,015	13,034	22,021	52,165	785	33	2,813	968	1,464	195	32	188	1,180
1921.....	1,315,366	22,128	66,692	10,504	9,463	24,663	327	158	5,797	495	543	145	375	....	481
1922.....	1,919,126	133,143	134,292	64,983	15,280	46,460	350	315	16,151	330	408	115	240	200	6,300
1923.....	2,900,142	184,771	250,504	199,932	19,907	64,467	194	178	20,444	272	59	....	193	252	1,875

horsepower of 10 and 5. Renault comes second on the list, with an estimated output of 18,000 passenger cars and trucks of various types. Renault, however, has a number of side lines, such as tractors, rail cars, stationary engines, reducing gears, etc., which doubtless put him at the head of the French automotive industry.

After these two there is a considerable drop to the 10,000 to 5000 car level, this group comprising the Ford assembly plant at Bordeaux, estimated to have produced 10,000 to 12,000 cars during the year for the French and the Northern African markets; Peugeot, with a total output of 10,000, and Mathis with 6000.

The next drop is to the group having produced from 3500 to 2500 cars during the year, these being in approximate order of importance, Talbot-Darrack, De Dion Bouton, Unic, Delage, Chenard-Walcker, Berliet, Panhard-Levassor, Amilcar and Salmson.

The following firms have produced between 1000 and 2000 cars during the year: Delahaye, Lorraine-Dietrich, Benjamin, Voisin, D. F. P., and Corre-la-Licorne. All others have an output of less than 1000.



In classifying makers according to the number of cars produced, it should be pointed out that the value of their product is variable. Delage, Unic, Chenard-Walcker, Panhard-Levassor and De Dion Bouton, producing medium and high-grade cars, undoubtedly have a much bigger turnover than such makers as Salmson and Amilcar, specializing on low-priced light cars.

Of the total French production, 89 per cent is in the hands of 20 manufacturers, leaving only 11 per cent to be divided among the remaining 60. These latter comprise a few well-known firms building a strictly limited number of very high-grade chassis, and a bigger number of little-known makers producing on a very small scale.

As in past years, nearly all British manufacturers of cars, trucks and motorcycles refuse to divulge for publication figures relating to their outputs. Only Morris, who admittedly has the biggest output of any British maker, has no reluctance to his figures being made public, so it can be said that this maker turned out 19,753 cars during the twelve months ending Oct. 31 last.

The figure of 75,000 for total British car production is a conservative estimate, which does not include the output of the Ford plant at Manchester. It is founded mainly upon confidential official figures received from a large proportion of the most important makers and upon data which may be considered approximately correct, received unofficially concerning most of the others.

Ford passenger car production in England was approximately 16,000. The Ford Co. of Manchester estimate that 139,000 of their cars are in use in the British Isles, as compared with 123,000 twelve months ago.

British Truck Production About 3000

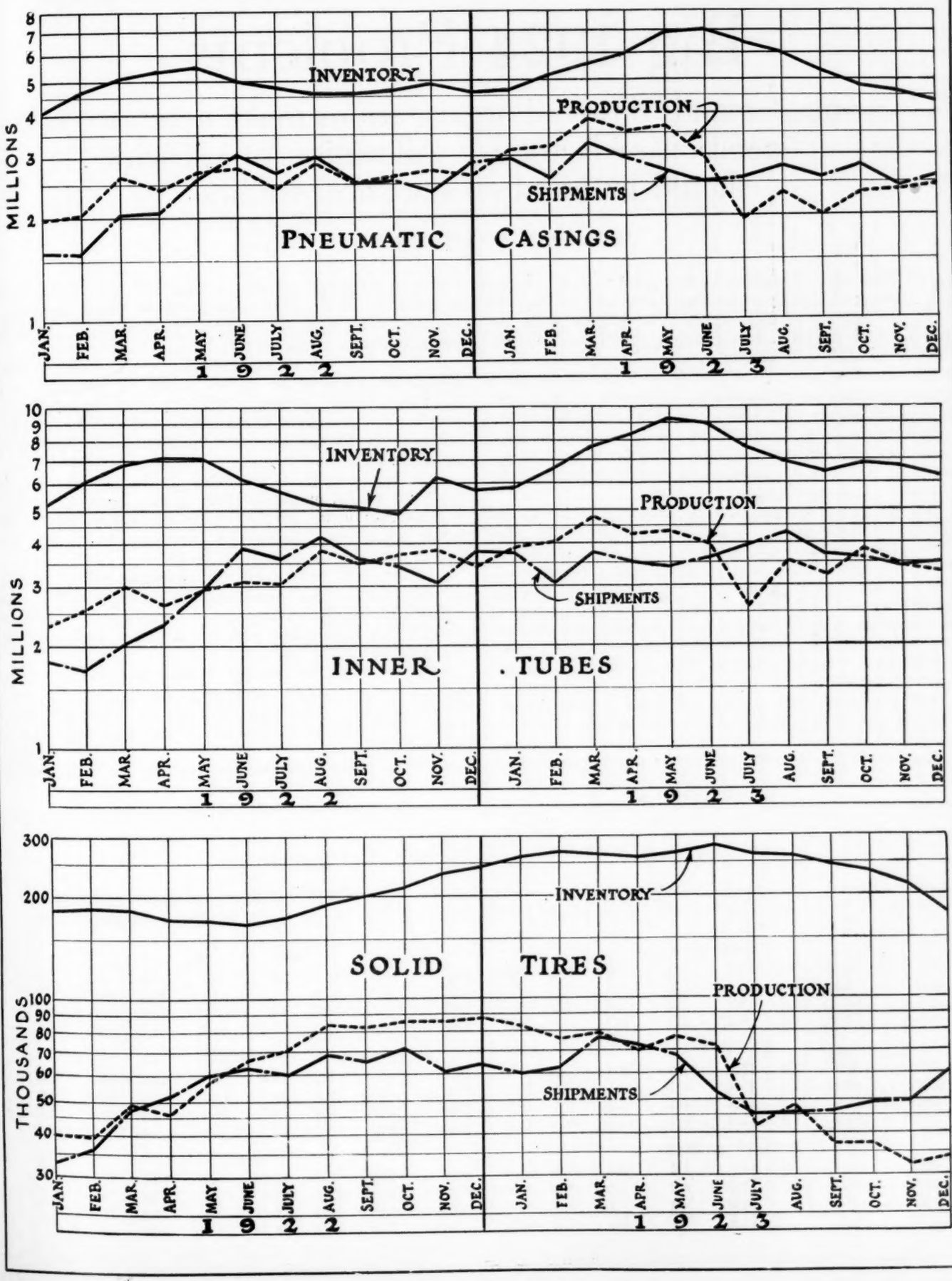
Estimating upon figures received from various sources, the British production of trucks can be put at approximately 3000. That is better than 1922, but compares with 8000 in 1919. It indicates that the 23,000 additional truck registrations (ignoring motor buses, coaches and fire engines) are comprised mainly of Fords, imported vehicles, and some of the last of the war surplus stock to be disposed of.

The output of motorcycles can be estimated at approximately 60,000 in 1923, more than half of which were the combined output of the Triumph and Douglas plants.

Not even estimates can be given concerning the production of British tires in 1923.

As regards British production in 1924, that of passenger cars ought to reach a figure appreciably over 100,000. Several makers are planning to increase outputs by 50 per cent, others by still more, while Morris has announced that his program is for 50,000 cars.

Activities of Rubber Association Members Show Tire Trends



Dealers and Distribution Are Big 1924 Problems

Growing demands on retail organizations make necessary close cooperation of factories. Allocation of agencies should be based on statistical studies.

By Norman G. Shidle

AUTOMOBILE dealers have not increased in number nearly so rapidly as have registrations nor has the number of service stations kept pace with the growth in use of cars and trucks during the last decade. Every year individual repair shops are being called upon to handle more cars, while the dealer sales force has a greater number of replacement prospects to work on. In 1919 there were 221 motor vehicles per dealer in the United States as against 338 at the beginning of 1924. There was one service station to care for every 142 vehicles in 1919, but the number per repair shop had gone up to 217 on Jan. 1, 1924.

The increased demands being made on dealers and service stations are causing manufacturers to give closer attention to their retail organizations than ever before. While greater service needs mean better business for repair shops in general, they mean also heavier responsibilities. Car and truck builders are finding it necessary to do considerable educational work and to render practical assistance to dealers along selling and service lines. Many retail problems have become national rather than local in scope and the manufacturer is finding himself with a very real part to play in providing an adequate background for the efforts of his retail organization.

Study of the dealer situation from the standpoint of the manufacturer reveals several outstanding features in addition to the increased pressure being exerted on retailers from a sales and service standpoint. Most important among these are:

1. Over half of all car agencies are in towns with a population of 5000 or under. Only 11 per cent is in the large urban centers. This situation has remained practically unchanged for a number of years and represents, generally speaking, a sound distribution policy for the industry.

Detailed analysis of company figures shows that the most successful manufacturers in each price class have a relatively large part of their representation in the small towns, the percentage for many important producers running as high as 65 to 75.

2. Fifty per cent of all car agencies are selling vehicles priced at less than $1,000. The other half is marketing cars in the various price classes over $1,000, although far more than half of the cars produced and operated are in the lower price groups.

3. There is little change in the distribution of car agencies either according to population groups or price classes. Actual numbers have grown materially since 1921, but few relative changes of any importance are to be noted.

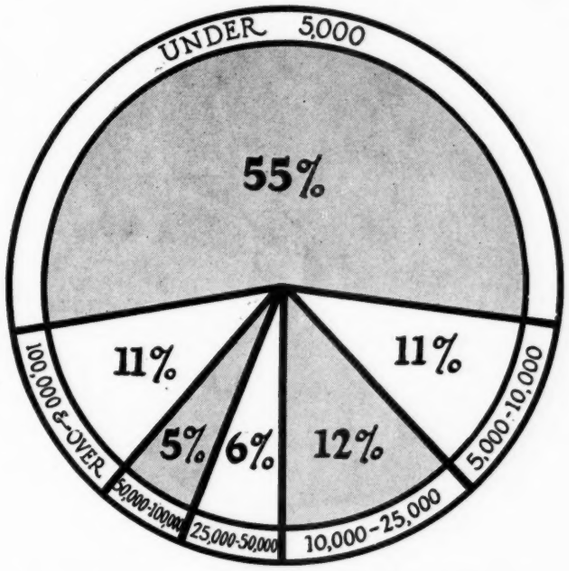
Of these three outstanding features, the last, perhaps,

Distribution of Car Agencies in Each Price Group

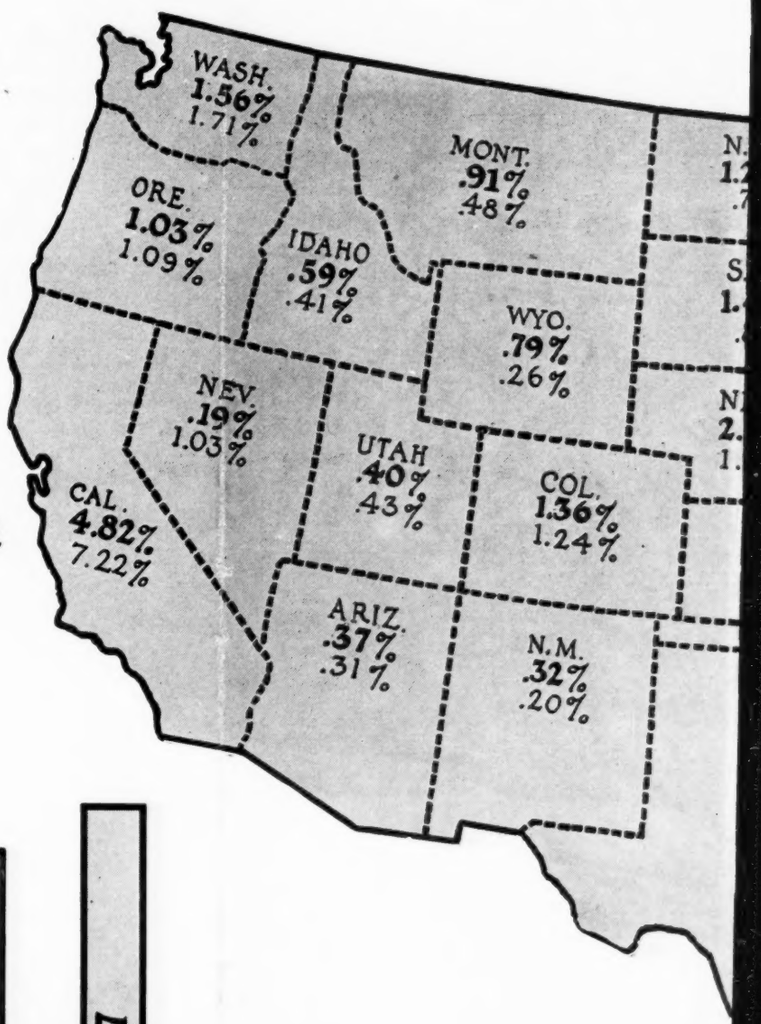
Population:	Under 5,000	5,000–10,000	10,000–25,000	25,000–50,000	50,000–100,000	Over 100,000	% of Total
	%	%	%	%	%	%	%
Under $500							
1921	75.5	7.8	7.2	3.0	1.5	5.0	33.0
1922	73.1	8.1	6.6	3.1	2.2	6.7	31.2
1923	71.7	8.1	6.9	3.4	2.3	7.8	30.4
1924	72.9	8.3	6.6	2.8	2.2	7.4	32.2
$500 to $1,000							
1921	63.8	11.0	11.5	5.3	2.8	5.4	21.0
1922	58.0	11.1	11.8	6.4	4.6	8.1	19.2
1923	55.6	11.6	12.3	6.6	4.5	9.4	19.2
1924	54.3	11.9	12.4	6.4	4.7	10.3	18.1
$1,000 to $2,000							
1921	52.9	10.9	13.7	7.6	5.4	10.3	37.9
1922	48.2	12.6	13.6	8.2	5.8	11.45	40.05
1923	47.3	12.6	14.5	8.2	5.7	11.8	39.6
1924	47.2	12.7	14.6	7.4	5.5	12.3	37.8

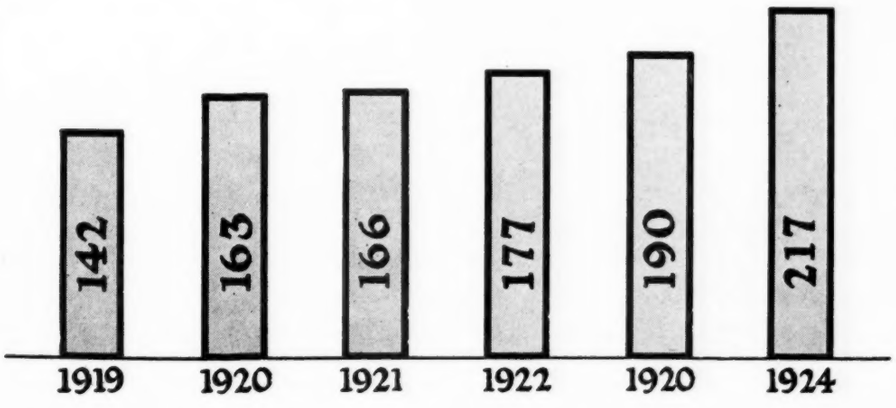
Population:	Under 5,000	5,000–10,000	10,000–25,000	25,000–50,000	50,000–100,000	Over 100,000	% of Total
	%	%	%	%	%	%	%
$2,000 to $3,000							
1921	30.4	10.1	18.0	13.7	8.9	18.8	7.1
1922	25.9	12.2	17.1	13.1	10.5	21.2	6.9
1923	27.2	12.6	16.7	13.1	10.3.	18.9	7.3
1924	32.5	12.9	16.6	10.2	9.6	18.2	7.4
Over $3,000							
1921	9.0	6.2	14.6	14.1	14.3	41.7	1.4
1922	24.6	9.2	14.0	11.0	9.2	32.1	2.6
1923	29.3	9.6	13.1	10.4	8.4	29.1	3.7
1924	38.4	10.0	12.6	7.8	7.4	23.9	4.6
Total							
1921	60.8	9.8	11.4	6.2	3.6	8.6	...
1922	55.9	10.8	11.3	6.7	4.9	10.6	...
1923	54.5	10.9	11.9	6.9	4.9	11.4	...
1924	55.0	11.0	11.7	5.9	4.8	11.3	...

Dealers



Percentage of Car Agencies in Towns of Various Sizes. Jan. 1, 1924.





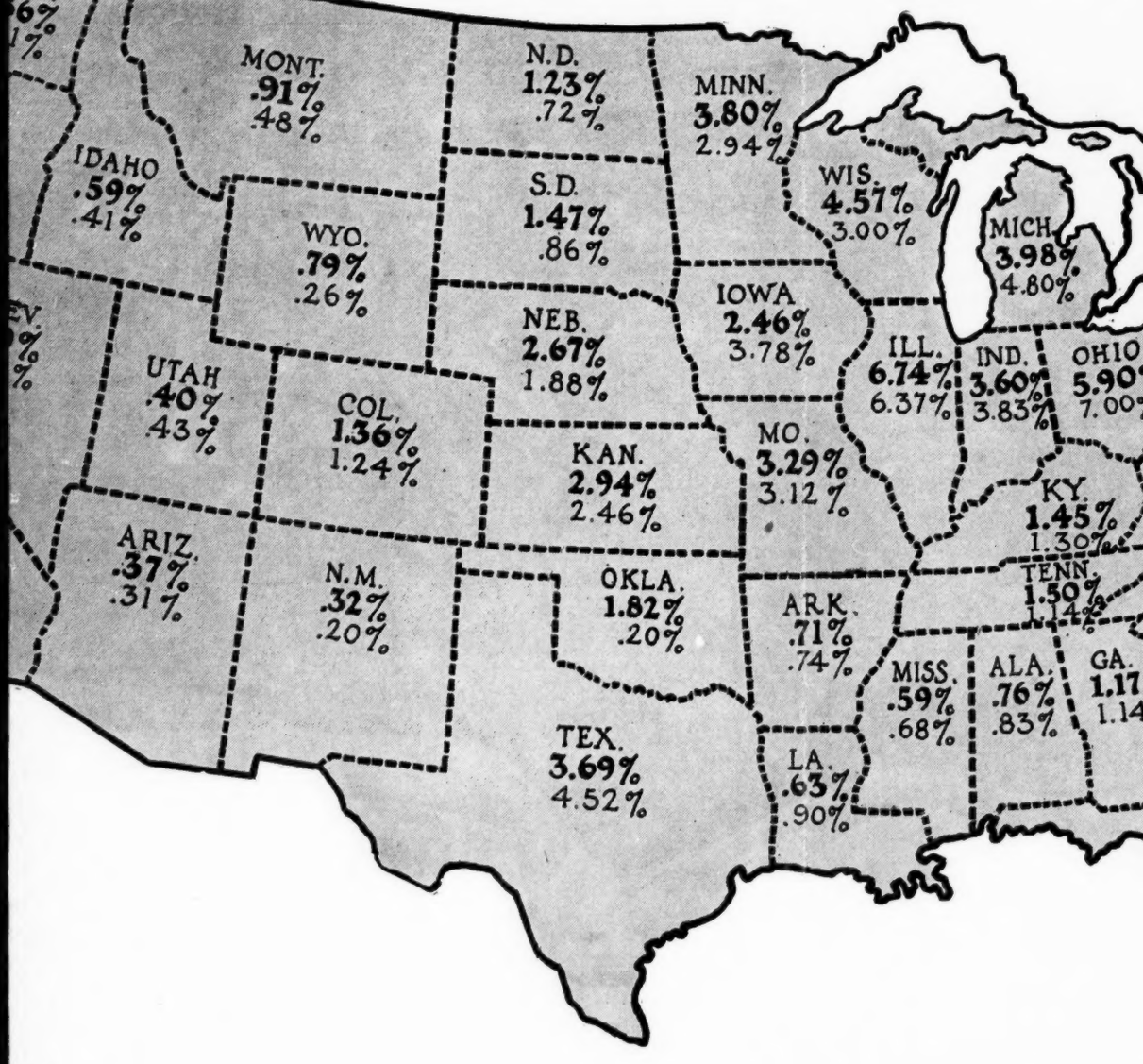
Number of Motor Vehicles Per Service Station as of Jan. 1, 1924.

Map Showing Per and Percentage

AUTOMOTIVE INDUSTRIES
AUTOMOBILE
February 21, 1924

Dealers, Sales & Servic

PERCENT OF DEALERS IN HEAVY
PERCENT OF REGISTRATION IN LIGH



Map Showing Percentage of Motor Vehicle
and Percentage of Registrations in Each S
Jan. 1, 1924.

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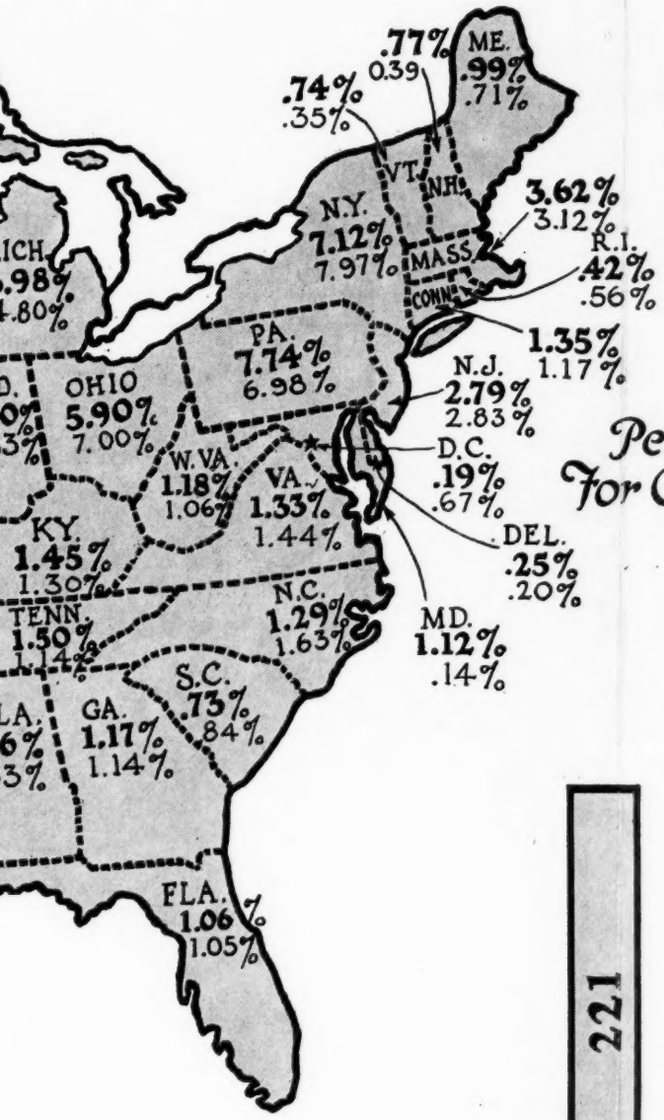
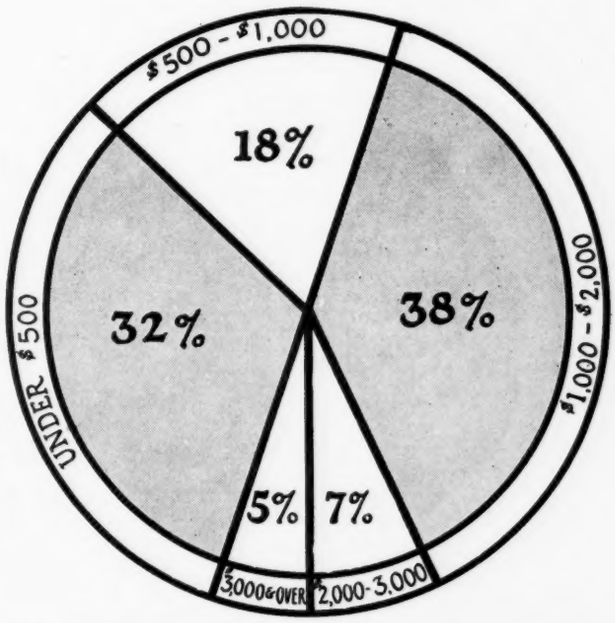
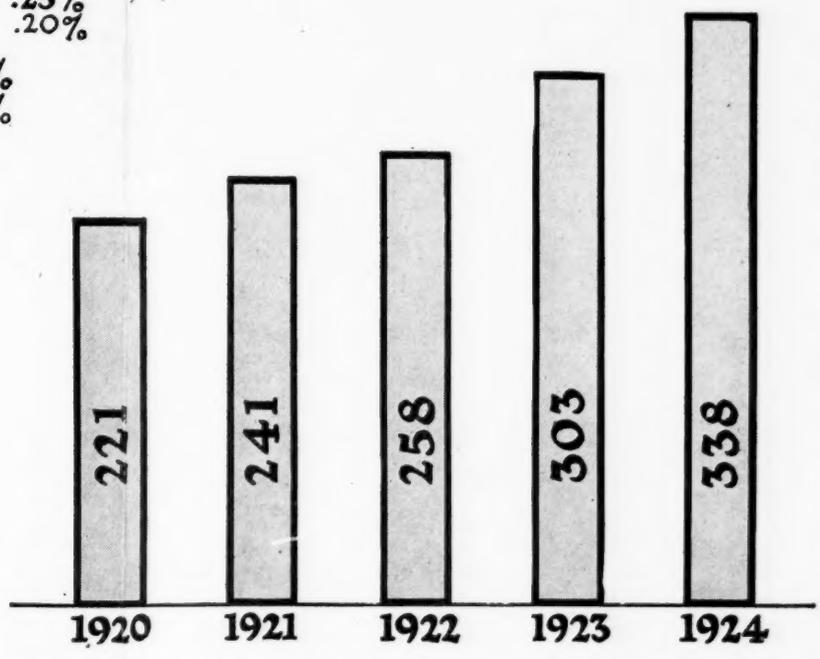
IN HEAVY FIGURES
N IN LIGHT FIGURES



hicle Dealers
ach State



Percentage of Car Agencies For Cars in Each Price Class. Jan 1, 1924.



Number of Motor Vehicles Per Dealer as of Jan. 1, 1924.

Percentage of Dealers by States
January 1, 1924

Pennsylvania	7.74	Oklahoma	1.82	Wyoming	0.79
New York	7.12	Washington	1.56	New Hampshire	0.77
Illinois	6.74	Tennessee	1.50	Alabama	0.76
Ohio	5.90	South Dakota	1.47	Vermont	0.74
California	4.82	Kentucky	1.45	South Carolina	0.73
Wisconsin	4.57	Colorado	1.36	Arkansas	0.71
Michigan	3.98	Connecticut	1.35	Louisiana	0.63
Minnesota	3.80	Virginia	1.33	Idaho	0.59
Texas	3.69	North Carolina	1.29	Mississippi	0.59
Massachusetts	3.62	North Dakota	1.23	Rhode Island	0.42
Indiana	3.60	West Virginia	1.18	Utah	0.40
Missouri	3.29	Georgia	1.17	Arizona	0.37
Kansas	2.94	Maryland	1.12	New Mexico	0.32
New Jersey	2.79	Florida	1.06	Delaware	0.25
Nebraska	2.67	Oregon	1.03	District of Columbia	0.19
Iowa	2.46	Maine	0.99	Nevada	0.19
		Montana	0.91		

is the most significant. **Study of the figures** shows that the actual number of sales, the number of manufacturers in the field and other similar factors do not affect materially the proportion of dealers in given classes. Whether the year develops good or bad business, the proportion of dealers for low-priced cars remains almost fixed. If there is a large dealer mortality, the number which stop selling various priced cars is in such proportion as to leave unchanged the relative standing among those left.

If manufacturers make strenuous drives for new dealers, or adopt an exclusive agency policy they may increase the actual number of car agencies, but they do not change the proportion of retailers selling cars in any given price class. A steady, but very slow, rise in percentage of agencies for high-priced cars is the only trend that can be noted definitely.

The year 1921 was one of business depression, while the two years just passed have been marked by constant expansion throughout the industry. Consequently, the years 1921 to 1924 include various kinds of economic conditions and offer a good period for examination. The stability of the percentages is indicated clearly by the following table showing the proportion of car agencies in various price groups since 1921. Since various cars have changed their prices during this time, the price groupings are used simply as a means of classifying each car in its competitive class in a general way. In making the price-group calculations the following classifications were preserved throughout the four years.

$500 and Under
Chevrolet
Ford
Overland
Star

$500-$1,000
Columbia
Dodge
Dort
Durant
Gardner
Gray
Maxwell
Oakland
Oldsmobile
Overland

$1,000-$2,000
American
Anderson
Apperson
Auburn
Barley
Buick
Case
Chalmers
Chandler
Cleveland
Davis
Earl
Elcar
Essex
Flint
Franklin
Hanson
Haynes
Hudson
Hupmobile
Jewett
Jordan
King
Kissel
Lexington
Moon
Nash
Pilot
Reo
Rickenbacker
Sayers-Six
Studebaker
Velie
Westcott
Willys-Knight

$2,000-$3,000
Cadillac
Cole
H.C.S.
National
Packard
Paige
Peerless
Premier
R & V-Knight
Roamer
Stanley
Stearns-Knight
Stephens
Sterling-Knight
Stutz
Wills Ste. Claire

$3,000 and Over
Cunningham
Duesenberg
La Fayette
Lincoln
Locomobile
Marmon
McFarlan
Mercer
Pierce Arrow
Rolls-Royce
Winton

The percentage of car agencies in each of these groups since 1921 has been as follows:

Percentage of Car Agencies

	$500 and Under	$500–$1,000	$1,000–$2,000	$2,000–$3,000	$3,000 and Over
1921	33	21	38	7	1
1922	31	19	40	7	3
1923	30	19	40	7	4
1924	32	18	38	7	5

A small but steady rise in the proportion of high-priced car agencies is noticeable, probably due to the fact that more dealers in small towns have been taking on expensive car agencies in addition to the low-priced lines which comprise the bulk of their sales. In general, however, the percentages remain about the same.

A similar condition exists as regards distribution according to towns of various sizes. The following table shows the relatively small change from year to year:

Percentage of Car Agencies in Towns with Population—

	Under 5000	5000–10,000	10,000–25,000	25,000–50,000	50,000–100,000	Over 100,000
1921	60	10	11	6	4	9
1922	56	11	11	7	5	10
1923	54	11	12	7	5	11
1924	55	11	12	6	5	11

Detailed study of the distribution of dealers for cars of a given price class, however, brings to light several interesting trends. In the table showing "Distribution of Car Agencies in Each Price Group," relatively little shift appears in the three lower price classifications. In the "Over $3,000" group, however, a marked trend appears toward extending distribution into the smaller towns.

Percentage of car agencies in towns of various sizes
January 1, 1924

Under 5000	55%
5000-10,000	11
10,000-25,000	12
25,000-50,000	6
50,000-100,000	5
100,000 and over	11

During the depression of 1921 it went hard with the dealers in small towns who were trying to sell high-price motor vehicles. A good many of them went out of business and a good many more gave up the agencies or practically ceased attempting to sell. That year only 9 per cent of the agencies for big cars were located in towns of 5000 or less population; 41 per cent were in the cities with a population of 100,000 or more.

Times changed. Business began to pick up all over the country and the small town merchant found it profitable once more to sell some expensive automobiles. The manufacturer made definite efforts to regain lost ground in these semi-rural areas. As a result of these activities the percentages had shifted materially at the end of twelve months. The large city agencies comprised only 32 instead of 41 per cent of the total, while the representatives in towns of under 5000 population had leaped to more than 24 per cent.

This trend continued throughout the next two years until finally at the beginning of 1924 38.4 per cent of agencies for cars selling for over $3,000 were located in small towns, while urban centers had only 23.9 per cent of the total.

In every other price class there has been a slight trend toward placing a greater percentage of the dealers in large towns. It is not probable that this shift has been the result of any intention on the part of manufacturers. As pointed out previously, the greatest success has been achieved in the past by those makers who concentrated a large proportion of their sales force in the small towns. Consequently, what slight trend there is in the opposite direction probably has come about by chance rather than by design.

A large proportion of the dealers are located in the States having a high registration total, as might be expected. New York, California, Pennsylvania, Ohio and Illinois, the States in which the largest number of vehicles are operated, lead in dealer totals as well, but the Keystone State, which stands third in the registration list leads in number of dealers. In Pennsylvania are 7.74 per cent of all the automobile dealers in the United States, while New York stands second with 7.12 per cent and Illinois third with 6.74 per cent. Ohio is fourth with 5.90 per cent.

Percentage of car agencies for cars in each price class
January 1, 1924

Under $500	32%
$500-$1,000	18
$1,000-$2,000	38
$2,000-$3,000	7
$3,000 and over	5

Throughout this article emphasis has been laid on relative and percentage distribution of dealers and car agencies rather than on actual numbers, because a study of the proportions of representation in various groups is essential to a proper application of general trends to specific problems. So far as can be determined at the present time there are about 45,000 motor vehicle dealers in the United States to-day, while service stations and repair shops number about 70,000.

American Automotive Industry Increases Use of Raw Materials

THE automotive industry consumed about 41,400,000 sq. ft. of plate glass in 1923 as against 35,000,000 in 1922, according to estimates made by the Plate Glass Manufacturers of America. Total production of plate glass in the United States last year amounted to about 89,000,000 sq. ft. and 26,000,000 sq. ft. were imported.

Nearly 68 per cent of all the die casting made last year was purchased by automotive factories. Total production amounted to approximately 32,500,000 lbs., while automotive consumption was 22,025,000 lbs.

Leather and imitation leather used by the automotive industry in 1923 amounted to 246,840,000 sq. ft., while upholstery cloth consumption was 18,585,600 yards. The industry used 32,089,200 sq. ft. of top material.

Steel Production and Automotive Steel Consumption, 1923

	Total Steel Production (Tons)	Average Value Per Ton All Steel	Total Value All Steel	Automotive Consumption	Average Value Per Ton Automotive Steel	Total Value Automotive Steel
Bars	5,860,000	$53.00	$310,580,000.00	1,610,000	$79.50	$127,995,000.00
Sheets	3,330,000	84.00	279,720,000.00	1,035,000	117.00	121,095,000.00
Hoops, bands, etc.	790,000	68.00	53,720,000.00	400,000	68.00	27,200,000.00
Wire rods	2,690,000	60.00	161,400,000.00	135,000	60.00	8,100,000.00
Plates	4,280,000	54.40	232,832,000.00	130,000	54.40	7,072,000.00
Pipes and tubes	3,800,000	68.00	258,400,000.00	40,000	68.00	2,720 000.00
Shapes	3,480,000	54.40	189,312,000.00	40,000	54.40	2,176,000.00
Forging billets	630,000	46.00	28,980,000.00	20,000	46.00	920,000.00
All others	1,720,000	46.00	79,120,000.00	60,000	46.00	2,760,000.00
Tin plates	1,425,000	122.00	173,850,000.00	....	....	....
Rails: Splice bars, etc.	3,575,000	43.00	153,725,000.00	....	....	....
	31,580,000		$1,921,639,000.00	3,470,000	....	$300,038,000.00

Automotive consumption of steel was about 11 *per cent of the total tonnage and about* 16 *per cent of the total value. Omitting the value of tin plate and rails, the automotive industry used nearly* 19 *per cent of the total value of steel produced in* 1923.

Funds Are Expended Economically as Highway Growth Continues

THE growth of the good roads movement in the United States has resulted in a marked increase in the mileage of surfaced roads in the last two decades, but the total road mileage has advanced much less rapidly. While the surfaced mileage has increased 164 per cent in this time, the total mileage has gone up only about 40 per cent. This is the chief fact brought out by the highway development figures.

This indicates a sound growth and the proper expenditures of the huge sums which are going into highways. Greater road mileage is not needed. What is needed are more roads capable of carrying dense traffic. Congestion results from lack of good roads and not from lack of roads.

Traffic studies are growing in importance as a factor in the road building problem. Money must be expended to improve those roads which are capable of rendering maximum service and value to the community. This policy is being followed throughout the country.

Growth of Highway Mileage and Rural Highway Expenditures 1904-1923

Total Mileage		Surfaced Road Mileage		Rural Highway Expenditures	
1904	2,151,379	1904	153,500	1904	$59,527,170
1909	2,199,645	1909	190,000	1914	240,263,784
1914	2,445,761	1914	257,300	1921	911,589,895
1921	2,941,294	1921	387,700	1922	898,352,307
1923	3,000,000*	1923	415,000*	1923	943,139,148*

* Estimated.

Total Mileage and Mileage of Surfaced Roads Outside of Cities and Towns

State	Total Mileage	Miles of Surfaced Road Jan.1,1922	Miles Surfaced During Calendar year 1922
Alabama	58,410	10,420	357.9
Arizona	21,227	1,233	413.5
Arkansas	74,866	3,871	872.5
California	75,889	14,275	988.2
Colorado	48,143	4,599	1,630.9
Connecticut	12,152	2,206	167.7
Delaware	3,933	448	79.8
Florida	27,613	6,438	437.9
Georgia (a)	94,000(a)	18,000(a)	1,060.0 (a)
Idaho	31,099	2,982	615.0
Illinois	96,326	11,473	962.1 (a)
Indiana	76,246	39,857	2,435.1
Iowa	104,082	2,585	839.2
Kansas	128,552	1,101	271.0
Kentucky	68,704	15,436	603.0
Louisiana	39,803	2,771	756.0
Maine	21,483	2,953	349.7
Maryland	14,772	3,663	172.4
Massachusetts	18,868	6,575	236.1
Michigan	77,283	17,186	2,570.0
Minnesota	107,103	16,904	2,077.9
Mississippi	58,085	5,744	613.3
Missouri	111,520	7,880	465.7
Montana	64,782	1,772	129.2
Nebraska	86,556	496	160.0
Nevada	26,057	168	81.4
New Hampshire	13,841	1,691	145.8
New Jersey	14,061	6,505	319.2
New Mexico	45,549	1,802	298.6
New York	81,878	18,566	1,643.5
North Carolina	68,204	16,755	2,115.9
North Dakota	106,523	709	143.8
Ohio	84,219	36,067	1,205.0
Oklahoma	134,263	2,461	187.0
Oregon	45.475	8,050	978.5
Pennsylvania	99,991	13,921	942.0
Rhode Island	2,274	753	87.0
South Carolina	61,850	6,908	548.3
South Dakota	115,485	548	326.5
Tennessee	62,546	9,878	726.1
Texas	167,685	14,883	2,103.0
Utah	23,047	2,544	442.9
Vermont	14,677	3,545	148.5
Virginia	59,080	7,260	555.0
Washington	45,816	12,061	810.6
West Virginia	35,173	1,367	191.2
Wisconsin	78,679	19,714	1,958.1
Wyoming	46,528	440	138.1
Total	2,940,378	387,464	35,360.1

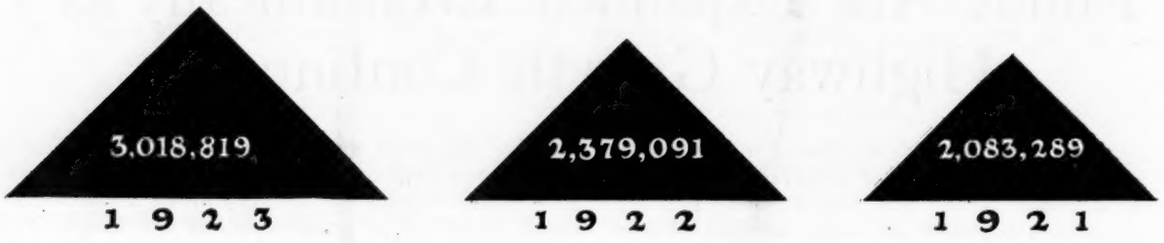
(a) Data approximate.

Road Mileage, Road Income and Other Related Data for United States in 1921, 1914, 1909 and 1904

	1921	1914	1909	1904
Total road mileage	2,941,294	2,445,761	2,199,645	2,151,379
Surfaced mileage	387,760	257,291	190,476	153,530
Percentage surfaced	13.2	10.5	8.7	7.1
Total income for all rural road purposes	1,149,437,896	240,263,784	‡	79,623,617
State and local road and bridge bonds outstanding at end of year	1,222,312,300	344,763,082	‡	‡
Land Area (Square miles)	2,973,830	2,973,830	2,973,830	2,974,099
Population total for United States	*105,273,049	†91,641,197	†91,641,197	§75,715,857
Rural population	*51,406,017	†49,348,883	†49,348,883	§45,197,390
Miles of road per square mile of area	0.99	0.820	0.740	0.720
Miles of road per 1,000 of rural population	57.2	49.5	44.6	47.6
Surfaced mileage per square mile of area	0.130	0.086	0.064	0.052
Surfaced mileage per 1000 of rural population	7.54	5.21	3.86	3.39
Road and bridge income per mile of road	390.79	98.22	‡	37.01
Road and bridge income per square mile of area	386.52	80.79	‡	26.77
Road and bridge income per capita	10.92	2.62	‡	1.05

*1920 Census. †1910 Census ‡No data available §1900 Census

Growth of Motor Vehicle Registrations Outside the United States



18,241,477 Cars and Trucks in Use Throughout the World

Total outside United States is 3,018,819, an increase over 1922 foreign registrations of 639,728, or 27 per cent. American makers increase overseas sales.

THE number of cars and trucks in use outside the United States increased 639,728, or about 27 per cent, in the last year. Total registrations in foreign countries now amount to 3,018,819. The large part played by American manufacturers in piling up this big gain is witnessed by the fact that they sold 328,999 cars and trucks abroad last year. This comprises about 51 per cent of the new vehicles put into operation outside this country.

American manufacturers were startled at the tremendous sales recorded in the domestic market during 1923, registrations in the United States having jumped to unexpected heights. Progress in foreign countries, however, was relatively as great. The percentage increase in registrations somewhat was greater abroad than it was at home. Sales in foreign countries went ahead at a rapid rate and fully kept pace with the remarkable pace set by the United States.

Countries showing rapid automotive progress include Australasia, Argentina, Sweden, Cuba, Spain, Denmark, England, France, Brazil and South America, although practically every nation contributed a share to the big increase in the world total. This is one of the significant features developed by analysis of the registration figures which are compiled annually by AUTOMOTIVE INDUSTRIES. Continued advances have been recorded in countries where automotive development already was well under way, but a good many less important areas show a substantial increase as well.

Registration data for the United States are analyzed in detail on following pages, so the present survey is confined to discussion of world summaries outside of this country. It is interesting to note in passing, however, that 16.4 per cent of all the cars and trucks in the world are located in foreign countries.

Europe still has the largest share of the world registration total, United States excluded, with the foreign countries of North and South America holding second place. The following tabulation gives a clear picture of the distribution of motor vehicles located outside the United States:

	Number	Per Cent of Total
Europe	1,690,931	56.40
North and South America	888,855	29.60
Oceania	175,404	5.61
Asia	161,385	5.33
Africa	74,697	2.35
U. S. non-contiguous territories	27,547	.71
Total	3,018,819	....

Six countries now have more than 100,000 motor vehicles; last year there were five. Argentina is the newcomer to this select circle, the rapid progress made in this important South American republic being indicated by the fact that it imported over 30,000 cars and trucks last year. Three countries—Italy, Belgium and Spain—now fall in the 50,000 to 100,000 group, while nine nations have in operation between 25,000 and 50,000 vehicles.

This makes a total of 19 countries with more than 25,000 cars and trucks in use, as against 17 in this class last year.

Largest Gains in Europe

Continents having the largest numerical registration also showed the greatest percentage increase over last year. Europe recorded a high percentage gain over 1922 despite generally unfavorable economic conditions. Its progress can be traced, however, to a very considerable advance in relatively few countries. Following are the increases by continents over 1922:

	Number	Per Cent
Europe	388,778	29.8
North and South America	174,953	24.6
Oceania	28,215	19.2
Asia	16,906	11.7
Africa	3,329	4.7

Accurate statistics still are difficult to obtain in many countries, so that several figures may be found in the ac-

companying tabulations which do not check closely with data previously given. When later and more authentic information has indicated a previous figure to have been wrong, changes have been made without any attempt to preserve consistency at the expense of accuracy. Such revisions probably will be necessary for some years to come in connection with more obscure territories. The present tables are correct, however, as regards practically all the countries important from a sales standpoint and should be of very practical assistance in making sales plans.

The world total of 18,241,477, including the United States, is 23.8 per cent greater than that of one year ago, the numerical gain being 3,498,009.

Detailed information of importance is revealed by a survey of the tabulations by continents.

North and South America

MARKED growth of motor vehicle registration in Canada and Argentina is one of the outstanding features of the figures for North and South America. Exclusive of the United States, this continent shows a gain of 174,953 over 1922. Both Canada and the Argentine increased more than 30 per cent, while substantial gains were made in all of the important Latin American territories.

Nearly 170,000 automobiles now are in use in South America, an increase of some 19,000 over 1922. The total for the entire continent of North and South America is 888,855, excluding United States.

Some estimates of registrations for Argentina place the number at considerably less than 100,000, but there is practically no doubt that the higher figure is justified. More than 30,000 motor vehicles were imported into the Argentine last year and the Ford assembly branch in that country estimates that the total number of cars and trucks in use at the present time is slightly over 100,000.

Despite an adverse rate of exchange, which caused prices to increase, more than 10,000 vehicles were bought in Brazil last year. Sales increased largely in the interior sections and the rural districts, both in the central and northern parts of the republic. Toward the close of the year sales became more active in the south. These favorable factors, coupled with increased road building, indicate that satisfactory progress is being made toward more widespread use of all kinds of automobiles.

The year just closed was an important one for automotive interests in Mexico, since approximately 7500 motor vehicles were sold in that country during the last twelve months and highway mileage was increased somewhat. The figure of 30,000 used for Mexican registrations is justified by careful study of import and sales statistics.

Even the best informed distributors at Havana have been unable to obtain exact figures as to the number of automobiles in Cuba and the 30,000 with which the island is credited must be accepted as an estimate. Cars are registered in 112 municipalities in Cuba and it has been impossible to gather official statements from all these sources. Estimates for Cuban registration range all the way from 19,000 to 35,000. It is generally agreed that motorcycles number about 350 and tractors approximately 1000.

Sales in Canada last year went ahead even more rapidly than those in the United States, 155,472 new vehicles having gone into service during 1923.

Registration figures for non-contiguous territories indicate that there has been considerable automotive activity in these sections during the last twelve months. The figures for Hawaii show an increase of 2928, or about 30 per cent, over last year, while the Alaskan gain is so great as to indicate that previous figures were too low. Porto Rico shows a gain of about 14 per cent.

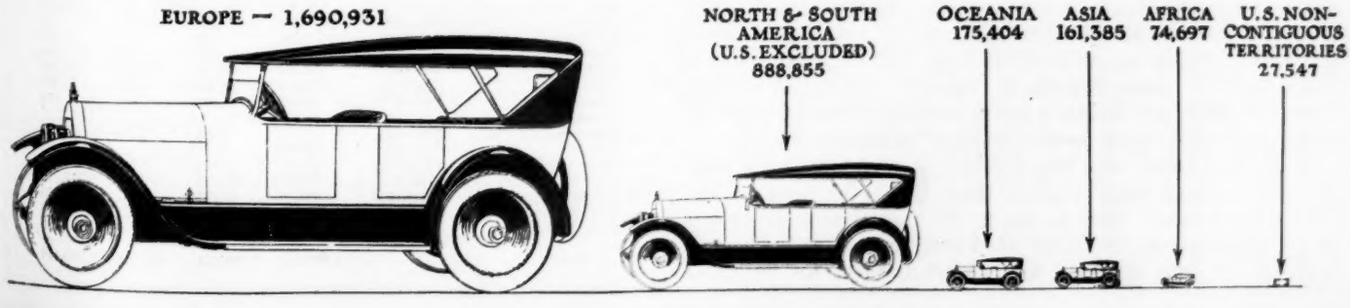
North and South America

Country	Date	Total Cars and Trucks	Cars	Trucks	Motorcycles
Argentina	Jan. 1924	100,000	95,000	5,000	2,000
Bahamas	Oct. 1923	494	347	147	11
Barbados	Jan. 1924	650	580	70	60
Bolivia	Oct. 1923	452	400	52	62
Brazil	Jan. 1924	32,000	29,000	3,000	650
British Honduras	Jan. 1924	110	85	25	1
Canada	Jan. 1924	642,571	554,874	87,697	23,400
Chile	Nov. 1923	11,062	9,984	1,078	12
Colombia	July 1923	2,376	2,126	250	75
Costa Rica	July 1923	336	298	38	15
Cuba	Jan. 1924	30,000	22,000	8,000	350
Dominican Republic	July 1923	2,100	1,767	333	63
Dutch West Indies	Jan. 1924	321	277	44	25
Ecuador	Jan. 1924	470	439	31	18
Guadeloupe	Jan. 1924	590	543	47	60
Guatemala	Jan. 1924	429	385	44	143
British Guiana	Oct. 1923	1,300	1,250	50	200
Dutch Guiana	Oct. 1923	145	.....	.....	10
French Guiana	Jan. 1924	100	80	20	.....
Haiti	Oct. 1923	446	436	10	35
Honduras	Oct. 1923	240	210	30	26
Jamaica	Nov. 1923	2,818	2,207	611	205
Martinique	Oct. 1923	986	912	74	50
Mexico	Jan. 1924	30,000	26,000	4,000	500
Newfoundland	Jan. 1924	700	640	60	35
Nicaragua	Oct. 1923	230	200	30	40
Panama	Nov. 1923	3,846	3,435	411	353
Paraguay	Nov. 1923	500	.....	.....	10
Peru	Jan. 1924	4,000	3,350	650	60
Salvador	Nov. 1923	550	525	25	25
Trinidad	July 1923	1,033	738	295	98
United States	Jan. 1924	15,222,658	13,455,073	1,767,585	176,630
Uruguay	Oct. 1923	14,000	13,400	600	610
Venezuela	Jan. 1924	4,000	3,550	450	160
Total	.....	16,111,513	14,230,111	1,880,757	205,991

Non-Contiguous Territories of U. S.

Alaska	Jan. 1924	831	545	286	75
Hawaii	Oct. 1923	18,428	14,203	4,225	449
Porto Rico	Oct. 1923	8,117	6,610	1,507	135
Samoa	Oct. 1923	171	121	50	18
Total	.....	27,547	21,479	6,068	677

Distribution of Motor Vehicles Outside the United States



World Registration of Cars and Trucks

(Alphabetically listed)

Alaska	831	Formosa	130	New Zealand	44,864
Algeria	8,713	France	460,000	Nicaragua	230
Angola	500	French Indo China	4,272	Nigeria	1,119
Arabia	369	Georgia	380	Norway	17,681
Argentina	100,000	Germany	152,068	Palestine	1,000
Australia	130,540	Gibraltar	110	Panama	3,846
Austria	12,037	Gold Coast	1,575	Paraguay	500
Azores	445	Greece	4,600	Peru	4,000
Bahamas	494	Guadeloupe	590	Persia	1,589
Barbados	650	Guatemala	429	Philippine Islands	15,400
Belgian Congo	260	Guiana—British	1,300	Poland	14,600
Belgium	61,300	Guiana—Dutch	145	Porto Rico	8,117
Bolivia	452	Guiana—French	100	Portugal	11,070
Brazil	32,000	Haiti	446	Portuguese East Africa	305
British East Africa	2,600	Hawaii	18,428	Reunion Islands	165
British Honduras	110	Honduras	240	Rumania	9,710
*British South Africa	40,200	Hongkong	873	Russia	20,000
Bulgaria	850	Hungary	5,160	Salvador	550
Canada	642,571	Iceland	175	Samoa	171
Canary Islands	1,859	India	48,629	Senegal	490
Ceylon	4,700	Iraq	5,050	Siam	2,768
China	9,660	Italy	82,357	Sierra Leone	160
Chile	11,062	Ivory Coast	110	Spain	60,194
Chosen	1,028	Jamaica	2,818	Sweden	36,625
Colombia	2,376	Japan	14,000	Switzerland	23,039
Costa Rica	336	Latvia	398	Syria	1,920
Cuba	30,000	Lithuania	142	Trinidad	1,033
Czechoslovakia	10,400	Madagascar	255	Tunisia	2,831
Danzig	1,170	Madeira Island	184	Turkey	1,840
Denmark	25,400	Malay Peninsula	15,320	United Kingdom	655,318
Dominican Republic	2,100	Malta	387	United States	15,222,658
Dutch East Indies	32,837	Martinique	986	Uruguay	14,000
Dutch West Indies	321	Mauritius	1,872	Venezuela	4,000
Ecuador	470	Mexico	30,000	Yugoslavia	2,500
Egypt	6,122	Morocco	5,377		
Esthonia	750	Netherlands	18,489		18,241,477
Finland	3,576	Newfoundland	700	*Including Union of South Africa	

Europe

THE relatively large gains made in Europe last year indicate very clearly the vital part which motor vehicles have come to play in the economic life of nations. Failure to solve the problems of reparations and war debts has kept Europe in a state of uncertainty and turmoil during the last twelve months and general business and social conditions have become much worse in certain areas. Despite this fact, European registration totals surpassed those of last year by 388,778, making a gain of 29.8 per cent over 1922.

There are in Europe today 1,690,931 motor vehicles. The proportion of trucks in use, however, is much greater than in the United States. While trucks comprise about 11.6 per cent of the total registrations in this country, they comprise about 28 per cent in Europe.

United Kingdom, France, Italy, Belgium and Spain are the leading motor vehicle countries of Europe as regards total registrations, but Denmark and Sweden are also of particular importance to American exporters. A very large proportion of all European sales, outside of those countries having an automobile industry of their own, is comprised of American-made vehicles, while American manufacturers are doing a good business even in some of those countries whose home industry is active.

It will be noted that the French figures used this year are very considerably higher than those included in the 1922 compilation. This is due to the fact that more recent information shows the total used last year already to have been out of date at that time. Consequently, the figure of 460,000 given in the accompanying table is about two years later than that used in the tabulation a year ago.

Europe

Country	Date	Total Cars and Trucks	Cars	Trucks	Motorcycles
Austria	Jan. 1923	12,037	8,455	3,582	3,536
Azores	Jan. 1924	445	420	25	20
Belgium	Nov. 1923	61,300	54,800	6,500	35,700
Bulgaria	Dec. 1923	850	650	200	150
Czechoslovakia	Oct. 1923	10,400	8,400	2,000	3,000
Danzig	Nov. 1923	1,170	990	180	210
Denmark	Jan. 1924	25,400	19,600	5,800	16,500
Esthonia	Jan. 1924	750	400	350	280
Finland	Nov. 1923	3,576	2,336	1,240	2,369
France	Jan. 1924	460,000	280,600	179,400	84,732
Georgia	Jan. 1924	380			155
Germany	July 1923	152,068	100,329	51,739	59,409
Gibraltar	Jan. 1924	110			195
Greece	Jan. 1924	4,600	3,300	1,300	1,500
Hungary	Dec. 1923	5,160	4,600	560	480
Iceland	Jan. 1924	175	135	40	40
Italy	June 1923	82,357			50,000
Latvia	Dec. 1923	398	264	134	142
Lithuania	Dec. 1923	142	66	76	150
Malta	Dec. 1922	387	287	100	1,200
Netherlands	Oct. 1923	18,489	14,634	3,855	26,208
Norway	Oct. 1923	17,681	12,796	4,885	7,095
Poland	Dec. 1923	14,600	11,000	3,600	600
Portugal	Jan. 1924	11,070			
Rumania	Nov. 1923	9,710	7,500	2,210	1,550
Russia	Dec. 1923	20,000			
Spain	June 1923	60,194	52,194	8,000	7,000
Sweden	Sept. 1923	36,625	28,685	7,940	19,296
Switzerland	June 1923	23,039	16,697	6,342	10,510
United Kingdom	Aug. 1923	655,318	469,490	185,828	430,138
Yugoslavia	Nov. 1923	2,500	2,200	300	150
Total		1,690,931	1,100,828	476,186	763,315

An increase of about 25 per cent over 1922 is recorded both in Denmark and in Sweden, while Spain shows a gain almost as great.

Accurate figures for Belgium are difficult to obtain because registrations in that country are cumulative; once a car has been registered, the license plate is good forever. The figure given here, however, was obtained by estimating the number of vehicles which have gone out of service since licensing began and by subtracting that estimate from the total number of licenses delivered.

The increased use of motor vehicles in Germany is remarkable, considering the sad economic plight of that country. Registrations have increased slightly over 20 per cent since last year, while motorcycles have leaped ahead 56 per cent.

Greece has in use 1150 more motor vehicles than in 1922, but about 25 per cent of this increase is composed of cars and trucks taken from old war trucks and rebuilt in local repairshops. Commenting on the figures for the Netherlands, American Consul Frank W. Mahin says: "The automobile trade is increasing rapidly in Holland and salesmen of American cars in this district are pleased with the results of the past year. Motorcycles are especially popular and their sales increase daily."

The United Kingdom has in use about 100,000 more vehicles than in 1922. The British figures used are as of Aug. 31, 1923. Compilations on this date represent the high point of British registration for the year since a quarterly system of registration is used and a good many vehicles are not operated during the last quarter of the year.

It is interesting to note that while car and truck registrations in the United States outnumber those in Europe about nine to one, European motorcycle registrations are about four and one-half times as great as those of this country.

Oceania

AUSTRALASIA, which again was one of the best markets for American motor vehicles, shows a registration increase of 19.2 per cent over 1922, representing a numerical gain of more than 43,000. The figures used for Australia are as of June, 1923, and were compiled by the Commonwealth Bureau of Census and Statistics at Melbourne. These are the last detailed data available, but a recent cable from Frank L. Edwards, secretary New South Wales Motor Traders Association, gives 160,000 as the number of vehicles in use as of Jan. 1, 1924.

Oceania

Country	Date	Total Cars and Trucks	Cars	Trucks	Motorcycles
Australia	June 1923	130,540	116,641	13,899	41,268
New Zealand	Jan. 1924	44,864			12,000
Total		175,404	116,641	13,899	53,268

World Registration of Cars and Trucks

(In Order of Total Number of Motor Vehicles in Use)

United States	15,222,658	Egypt	6,122	Guadeloupe	590
United Kingdom	655,318	Morocco	5,377	Salvador	550
Canada	642,571	Hungary	5,160	Paraguay	500
France	460,000	Iraq	5,050	Angola	500
Germany	152,068	Ceylon	4,700	Bahamas	494
Australia	130,540	Greece	4,600	Senegal	490
Argentina	100,000	French Indo China	4,272	Ecuador	470
Italy	82,357	Peru	4,000	Bolivia	452
Belgium	61,300	Venezuela	4,000	Haiti	446
Spain	60,194	Panama	3,846	Azores	445
India	48,629	Finland	3,576	Guatemala	429
New Zealand	44,864	Tunisia	2,831	Latvia	398
*British South Africa	40,200	Jamaica	2,818	Malta	387
Sweden	36,625	Siam	2,768	Georgia	380
Dutch East Indies	32,837	British East Africa	2,600	Arabia	369
Brazil	32,000	Yugoslavia	2,500	Costa Rica	336
Cuba	30,000	Colombia	2,376	Dutch West Indies	321
Mexico	30,000	Dominican Republic	2,100	Portuguese East Africa	305
Denmark	25,400	Syria	1,920	Belgian Congo	260
Switzerland	23,039	Mauritius	1,872	Madagascar	255
Russia	20,000	Canary Islands	1,859	Honduras	240
Netherlands	18,489	Turkey	1,840	Nicaragua	230
Hawaii	18,428	Persia	1,589	Madeira Island	184
Norway	17,681	Gold Coast	1,575	Iceland	175
Philippine Islands	15,400	Guiana—British	1,300	Samoa	171
Malay Peninsula	15,320	Danzig	1,170	Reunion Islands	165
Poland	14,600	Nigeria	1,119	Sierra Leone	160
Japan	14,000	Trinidad	1,033	Guiana—Dutch	145
Uruguay	14,000	Chosen	1,028	Lithuania	142
Austria	12,037	Palestine	1,000	Formosa	130
Portugal	11,070	Martinique	986	Gibraltar	110
Chile	11,062	Hongkong	873	British Honduras	110
Czechoslovakia	10,400	Bulgaria	850	Ivory Coast	110
Rumania	9,710	Alaska	831	Guiana—French	100
China	9,660	Esthonia	750		
Algeria	8,713	Newfoundland	700		18,241,477
Porto Rico	8,117	Barbados	650		

*Including Union of South Africa

MEN and organizations throughout the world, interested in automotive development, have made possible this third annual census of world automobile registrations.

To mention all those who have given of their time and knowledge in preparing information would require far more space than is available. American consuls in every part of the world have been especially helpful and have given marked evidence of familiarity with automotive conditions in the countries where they are stationed. Private automotive firms, automobile clubs, banks and chambers of commerce have contributed freely. The Automotive Division, Bureau of Foreign and Domestic Commerce, has rendered valuable assistance at various times. Foreign correspondents of AUTOMOTIVE INDUSTRIES have furnished a very large part of the information for certain areas. We are indebted to "El Automovil Americano" for most of the data concerning the Spanish speaking countries.

To all of those who aided in this work we owe a debt of gratitude. We take this opportunity to express to them our very sincere thanks.

Asia

AUTOMOTIVE development in the Far East has been relatively slow during the past year, registrations having increased only about 11 per cent over 1922. India has more cars and trucks in use than any other nation in Asia, its total being 48,629. Dutch East Indies stands second with 32,837, while the Malay Penninsula and Philippine Islands are nearly tied for third place with a little over 15,000 each. China, despite its huge area, stands in fourth place with 9,660 motor vehicles.

A more detailed set of figures for China has become available very recently. The revised survey made by D. L. Graham, clerk to American Trade Commissioner G. D. Howard, shows in considerable detail the number of vehicles in the various provinces. It indicates that out of the 8508 passenger cars now in use in China, 4009 are located in Shanghai and 1248 in Peking. Shanghai with 581 and Hong Kong with 158 are the largest truck using cities. Peking, which stands high in passenger car registrations, has in operation only 35 commercial vehicles.

It is estimated that about 1140 motorcycles are in use in China, of which 330 are in Shanghai, 320 in Hong Kong and 144 in Tientsin. So far as is known only two tractors are in use, while 95 motor fire engines are being operated.

The effect of the Japanese earthquake on the use of cars and trucks cannot be determined at present, so that any figure used at this time must be considered as an estimate. The utility of the motor vehicle is such, however, that the catastrophe may result in more rapid extension of automotive service rather than in curtailing development along these lines.

Asia

Country	Date	Total Cars and Trucks	Cars	Trucks	Motorcycles
Arabia	Oct. 1923	369	345	24	105
Ceylon	Jan. 1924	4,700	4,000	700	1,900
China	Jan. 1924	9,660	8,520	1,140	1,229
Chosen	Dec. 1923	1,028	983	45	50
Dutch East Indies	Nov. 1923	32,837	29,621	3,216	5,741
Hongkong	Nov. 1923	873	715	158	352
Formosa	Nov. 1923	130	66	64	10
French Indo China	Aug. 1923	4,272	3,922	350	360
India	Mar. 1923	48,629	44,845	3,784	15,517
Iraq	Jan. 1923	5,050	.....	.....	.....
Japan	Oct. 1923	14,000	12,600	1,400	3,717
Malay Peninsula	Nov. 1923	15,320	12,815	2,505	3,000
Palestine	Jan. 1924	1,000	.....	.....	112
Persia	Dec. 1923	1,589	.....	.....	50
Philippine Islands	Jan. 1924	15,400	11,200	4,200	1,501
Siam	Dec. 1923	2,768	2,568	200	768
Turkey	Oct. 1923	1,840	.....	.....	.....
Syria	May 1923	1,920	1,473	447	53
Total	.....	161,385	133,673	18,233	34,465

Africa

THE total of 74,697 motor vehicles registered in Africa is an increase of only 4.7 per cent over last year. Lack of good roads and the undeveloped state of many parts of the continent render automotive growth slow. It is impossible to obtain figures of any kind from many of the more obscure African countries, but lack of these statistics does not affect the total to any material extent.

British South Africa, including Union of South Africa, has by far the largest total of motor vehicles in use with 40,200. Algeria, which stands second, has only 8713, while Egypt, which is third, has 6122.

Prospects are bright for automobile sales in the Union of South Africa during the coming year, according to recent statements from that country. It is reported that sales in the Canary Islands are being made only on long credits and that registrations probably will increase slowly.

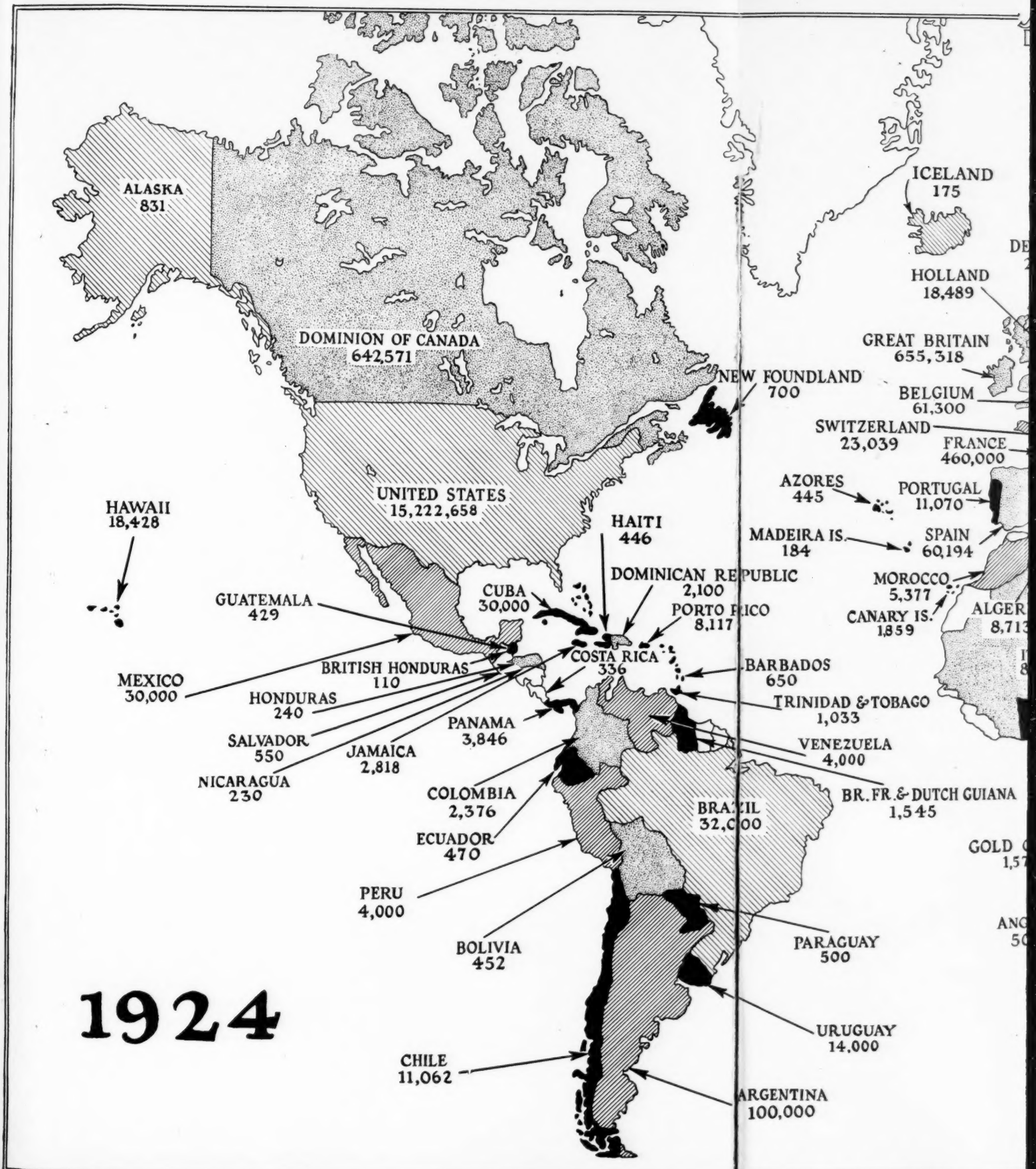
There is wide variance in estimates received concerning Algerian registrations and it does not seem possible to obtain entirely accurate information at the present time.

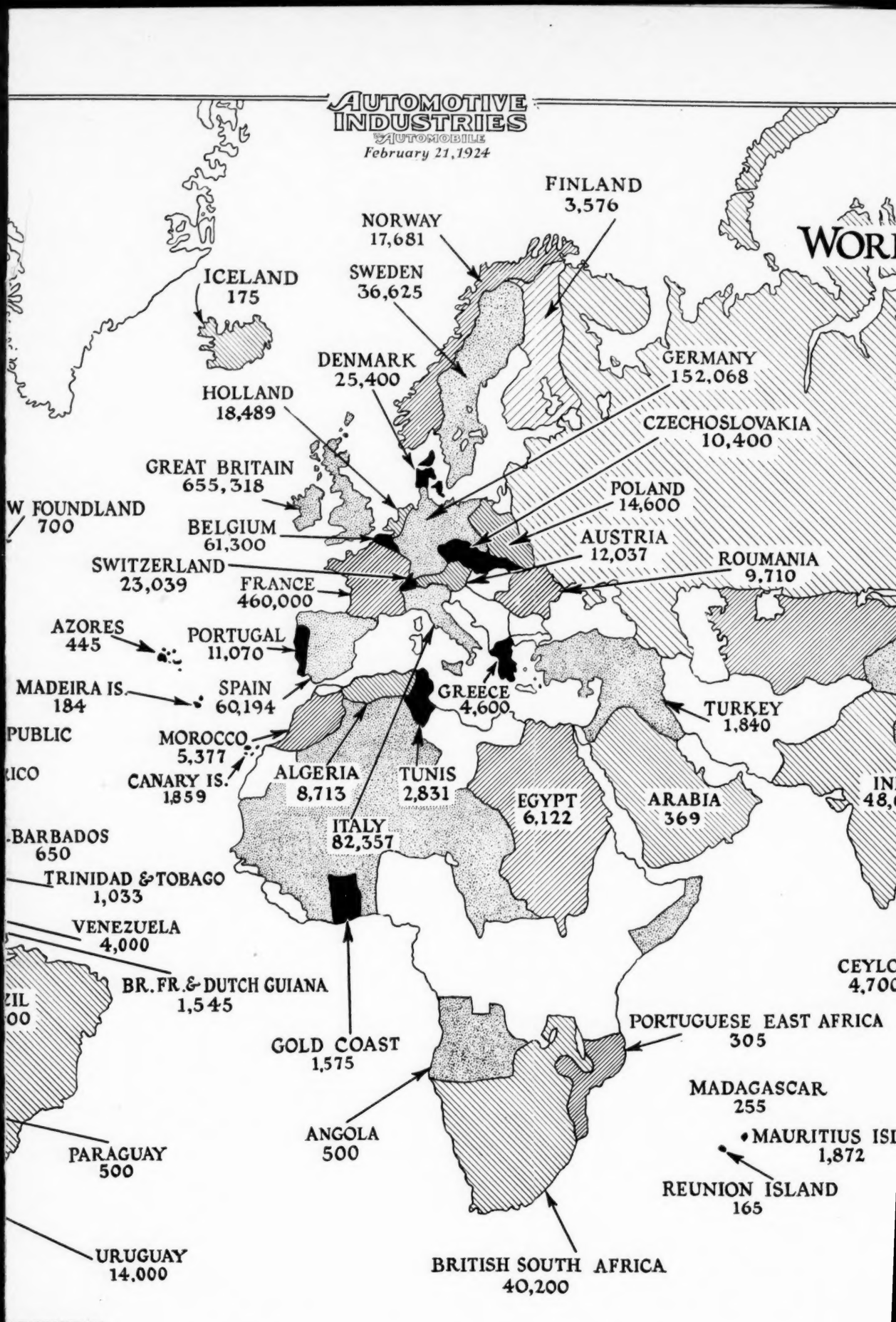
About 10 per cent of the motor vehicles are trucks.

Africa

Country	Date	Total Cars and Trucks	Cars	Trucks	Motorcycles
Algeria	Dec. 1922	8,713	.....	.....	555
Angola	Nov. 1923	500	337	163	50
Belgian Congo	Jan. 1924	260	.....	.....	.....
British East Africa	Jan. 1924	2,600	.....	.....	2,558
*British South Africa	Jan. 1924	40,200	38,000	2,200	14,000
Canary Islands	Oct. 1923	1,859	1,305	554	70
Egypt	April 1923	6,122	5,537	585	2,178
Gold Coast	Feb. 1923	1,575	288	1,287	344
Ivory Coast	Jan. 1924	110	.....	.....	.....
Madagascar	Jan. 1924	255	200	55	262
Madeira Island	Aug. 1923	184	154	30	89
Mauritius	Jan. 1924	1,872	1,733	139	239
Morocco	Oct. 1923	5,377	3,715	1,662	489
Nigeria	Feb. 1923	1,119	709	410	794
Portuguese East Africa	Nov. 1923	305	250	55	75
Reunion Island	Jan 1924	165	.....	.....	.....
Senegal	Jan. 1924	490	.....	.....	.....
Sierra Leone	Feb. 1923	160	99	61	96
Tunisia	Oct. 1923	2,831	2,555	276	466
Total	.....	74,697	54,882	7,477	22,265

*Including Union of South Africa.


ALASKA
831
DOMINION OF CANADA
642,571
UNITED STATES
15,222,658
HAWAII
18,428
MEXICO
30,000
GUATEMALA
429
BRITISH HONDURAS
110
HONDURAS
240
SALVADOR
550
NICARAGUA
230
JAMAICA
2,818
CUBA
30,000
HAITI
446
DOMINICAN REPUBLIC
2,100
PORTO RICO
8,117
COSTA RICA
336
PANAMA
3,846
COLOMBIA
2,376
ECUADOR
470
PERU
4,000
BOLIVIA
452
CHILE
11,062
BARBADOS
650
TRINIDAD & TOBAGO
1,033
VENEZUELA
4,000
BR. FR. & DUTCH GUIANA
1,545
BRAZIL
32,000
PARAGUAY
500
URUGUAY
14,000
ARGENTINA
100,000
ICELAND
175
HOLLAND
18,489
GREAT BRITAIN
655,318
NEW FOUNDLAND
700
BELGIUM
61,300
SWITZERLAND
23,039
FRANCE
460,000
AZORES
445
PORTUGAL
11,070
MADEIRA IS.
184
SPAIN
60,194
MOROCCO
5,377
CANARY IS.
1,859
1924


AUTOMOTIVE INDUSTRIES
AUTOMOBILE
February 21, 1924
FINLAND
3,576
NORWAY
17,681
SWEDEN
36,625
ICELAND
175
DENMARK
25,400
GERMANY
152,068
HOLLAND
18,489
CZECHOSLOVAKIA
10,400
GREAT BRITAIN
655,318
POLAND
14,600
W. FOUNDLAND
700
BELGIUM
61,300
AUSTRIA
12,037
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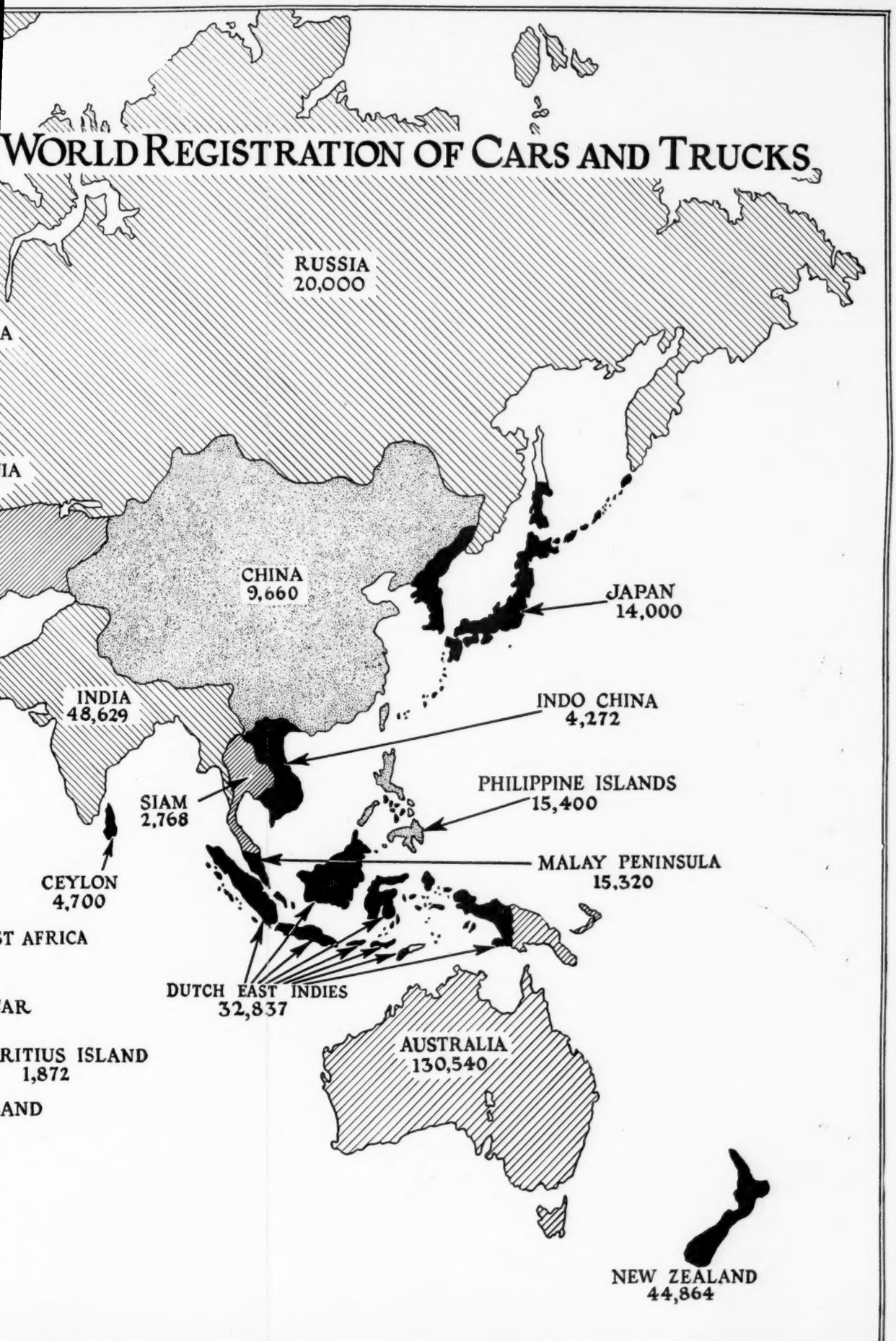
ITALY
82,357
BARBADOS
650
TRINIDAD & TOBAGO
1,033
VENEZUELA
4,000
BR. FR. & DUTCH GUIANA
1,545
GOLD COAST
1,575
PORTUGUESE EAST AFRICA
305
MADAGASCAR
255
ANGOLA
500
MAURITIUS ISL
1,872
PARAGUAY
500
REUNION ISLAND
165
URUGUAY
14,000
BRITISH SOUTH AFRICA
40,200
ARGENTINA
100,000


WORLD REGISTRATION OF CARS AND TRUCKS
RUSSIA
20,000
CHINA
9,660
JAPAN
14,000
INDIA
48,629
INDO CHINA
4,272
PHILIPPINE ISLANDS
15,400
SIAM
2,768
MALAY PENINSULA
15,320
CEYLON
4,700
DUTCH EAST INDIES
32,837
AUSTRALIA
130,540
NEW ZEALAND
44,864

Cars and Trucks in the United States Dec. 31, 1923

New York	1,214,642	Washington	261,224	North Dakota	109,244
California	1,100,283	North Carolina	247,612	Maine	108,609
Ohio	1,068,700	Virginia	219,092	Mississippi	104,400
Pennsylvania	1,064,624	Maryland	209,938	District of Columbia	103,171
Illinois	969,331	Kentucky	198,347	Rhode Island	85,480
Michigan	730,658	Colorado	189,356	Montana	73,828
Texas	688,899	Connecticut	177,931	Utah	66,025
Indiana	583,342	Georgia	173,794	Idaho	62,379
Iowa	576,398	Tennessee	173,365	New Hampshire	59,571
Missouri	476,373	Oregon	166,412	Vermont	52,776
Massachusetts	476,150	West Virginia	162,191	Arizona	48,741
Wisconsin	457,271	Florida	160,000	Wyoming	39,831
Minnesota	448,187	Louisiana	138,500	New Mexico	31,737
New Jersey	430,958	South Dakota	131,720	Delaware	29,977
Kansas	375,594	South Carolina	128,656	Nevada	15,700
Oklahoma	307,000	Alabama	126,642		
Nebraska	286,053	Arkansas	111,946	Total	15,222,658

Final Registration Figures Show 15,222,658 Cars and Trucks in United States

Gain of 2,922,888 is 23.8 per cent. One motor vehicle for every 7.32 persons. New York has highest total. California is second and Ohio third. Fees amount to more than $190,000,000.

THE final total of motor vehicle registrations in the United States as of Dec. 31, 1923, is 15,222,658, an increase of 2,922,888, or 23.8 per cent, over 1922. There is one car for every 7.32 persons in the country.

The revised figures differ but slightly from the preliminary data published in AUTOMOTIVE INDUSTRIES of Jan. 12. The totals for Rhode Island and Massachusetts are the only ones to be changed to any considerable extent. In both cases the revision was downward. The fact that the Rhode Island figures probably were high was pointed out at the time the preliminary statements were published, while the Bay State totals were changed by elimination of duplicate registrations which had been included in the figure originally quoted by State officials.

The revised statistics show that trucks compose about 11.5 per cent of total registrations; that motorists paid over $190,000,000 in fees, and that motorcycle registrations were 176,630 for the year.

New York has more vehicles in operation than any other State, its total being 1,214,642. California registered the greatest numerical gain, with 238,478, while the largest percentage increase was in West Virginia, where the 1923 total surpassed that of 1922 by 4.38 per cent.

Registrations Reflect Business Conditions

The registration figures reflect quite accurately business conditions in various parts of the country. A marked increase in the Southern States and relatively slow progress in the farming areas of the Northwest are outstanding features of a detailed analysis of the data. Only a few years ago the agricultural States were making rapid registration gains, while the South plodded along with small increases from year to year.

Today conditions have changed. Good prices for cotton and the development of a greater mileage of improved highways have combined to foster a rapid automotive growth in the South. Of ten States having the highest percentage gain in registrations, eight are below the Mason-Dixon line. North Dakota and South Dakota, with gains of only 10.30 and 5.17 per cent respectively, show the effects of low prices for wheat and other farm products.

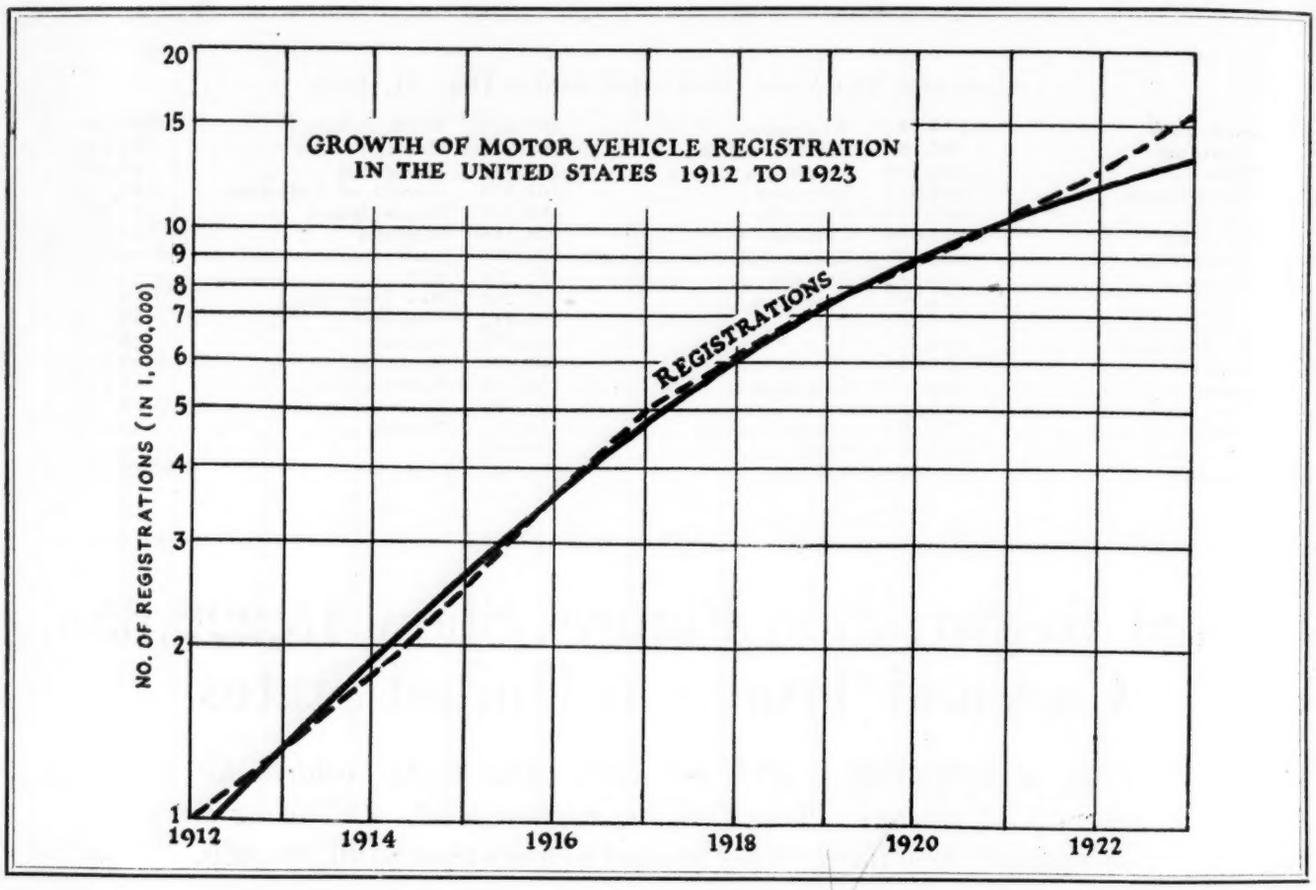
Small Gains in Farm Sections

It is interesting to note, however, that while the gains in farm areas are much less than those of other sections, the increases over 1922 are greater than were the 1922 gains over 1921. Thus, these agricultural States, although relatively less prosperous than other parts of the country, bought many more cars and trucks last year than they did in 1922. This point is important, as it indicates that the motor vehicles have become a real part of economic life and that cars and trucks will be bought even when business is not of the best.

This is indicated by the fact that a group of 11 agricultural States absorbed a total of 556,326 new vehicles in 1923 despite unfavorable conditions. When this number is translated into dollars and cents it represents an enormous amount of profitable business for manufacturers. The States included in the group which shows this gain over 1922 are: Arkansas, North Dakota, South Dakota, Kansas, Minnesota, Nebraska, Oregon, Oklahoma, Texas, Washington and Iowa.

California, recording the largest numerical gain of any of the States, maintains its position at the top of the list of persons per motor vehicle. In California there are now 3.51 persons per motor vehicle as against 4.29 a year ago. South Dakota, which had the largest number of vehicles as related to its population back in 1921, slipped into fifth place last year, and is pushed down to eighth in the 1923 compilation.

Following is a comparison of the ten leaders in respect to population for the last two years:



Motor Vehicle Registration 1912 to 1923

	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923
Alabama	3,385	5,435	8,078	11,925	21,636	32,873	46,171	58,898	74,637	82,343	90,052	126,642
Arizona	1,624	3,098	5,040	7,318	12,124	19,890	23,905	28,979	34,559	35,049	38,034	48,741
Arkansas	2,250	3,000	5,642	8,021	15,000	28,693	41,458	49,450	59,082	67,446	86,425	111,946
California	88,699	60,000	123,516	163,795	232,440	306,916	364,800	477,450	568,892	673,830	861,805	1,100,283
Colorado	8,950	13,135	17,756	27,568	43,296	66,850	83,244	104,865	127,549	145,739	162,328	189,356
Connecticut	24,101	27,189	33,009	43,985	61,855	85,724	92,605	109,651	119,134	137,526	154,675	177,931
Delaware	1,732	2,350	3,050	4,657	7,102	10,700	12,955	16,152	18,300	21,413	24,560	29,977
Dist. of Columbia	1,732	2,373	4,833	8,009	13,118	15,493	30,490	35,400	39,712	61,745	85,425	103,171
Florida	1,749	2,372	3,368	10.850	20,718	27,000	54,186	55,400	73,914	97,837	115,891	160,000
Georgia	19,120	18,500	20,916	25,671	47,579	70,357	99,800	127,326	144,422	131,942	145,584	173,794
Idaho	2,500	2,173	3,346	7,071	12,999	24,768	32,289	42,220	50,873	51,264	53,874	62,379
Illinois	68,073	94,656	131,140	180,832	248,429	340,292	389,620	478,438	568,759	670,434	786,190	969,331
Indiana	54,334	47,000	66,400	96,915	139,317	192,192	227,160	277,255	332,707	400,342	469,939	583,342
Iowa	47,188	75,088	112,134	152,134	198,602	254,317	278,313	363,857	437,300	460,528	500,148	576,398
Kansas	22,000	34,366	49,374	72,520	112,122	159,343	189,163	227,752	265,396	291,309	327,194	375,594
Kentucky	5,147	7,210	11,746	19,500	31,700	47,416	65,870	90,641	112,685	126,371	154,021	198,347
Louisiana	7,000	7,200	12,000	11,380	17,000	28,394	40,000	51,000	66,000	80,500	102,284	138,500
Maine	7,743	10,570	15,700	21,545	30,972	41,499	40,372	53,425	62,907	77,527	92,539	108,609
Maryland	10,487	14,254	20,213	31,047	44,245	60,943	74,666	95,634	116,341	140,572	165,624	209,938
Massachusetts	50,132	62,660	77,246	102,633	136,809	174,274	193,497	247,183	304,631	360,732	385,231	476,150
Michigan	39,579	54,366	76,389	114,845	160,052	226,693	262,125	325,813	412,717	477,037	578,980	730,658
Minnesota	29,000	37,800	67,862	93,269	46,000	54,009	204,458	259,743	309,569	328,700	380,557	448,187
Mississippi	2,895	3,000	5,964	9,669	25,000	36,600	48,400	45,030	63,484	65,139	77,001	104,400
Missouri	24,379	38,140	54,468	76,462	103,587	147,528	188,040	244,363	296,919	346,437	392,969	476,373
Montana	2,000	5,686	10,172	14,499	24,440	42,696	51,037	59,325	60,646	58,785	62,649	73,828
Nebraska	33,861	25,617	40,929	59,140	100,534	148,101	175,409	192,000	223,000	238,704	256,654	286,053
Nevada	900	1,131	1,487	2,009	4,919	7,160	8,159	9,305	10,464	10,819	12,647	15,700
New Hampshire	5,764	7,420	9,571	13,499	17,508	22,267	24,817	31,625	34,680	42,039	48,293	59,571
New Jersey	43,056	48,892	60,247	78,232	104,341	134,964	155,519	190,873	227,737	272,994	341,626	430,958
New Mexico	911	1,721	2,945	5,100	8,228	8,457	15,000	18,077	22,109	24,703	25,473	31,737
New York	107,262	134,405	169,966	234,032	317,866	411,567	463,758	571,662	669,290	812,031	1,002,293	1,214,642
North Carolina	6,178	10,000	14,677	21,000	33,904	55,950	72,313	109,017	140,860	148,684	182,550	247,612
North Dakota	8,997	13,075	15,701	24,908	40,446	62,993	71,627	82,885	90,840	92,644	99,052	109,244
Ohio	63,066	86,054	122,504	181,332	252,431	346,772	412,775	511,031	615,397	720,632	859,504	1,068,700
Oklahoma	6,524	7,934	13,500	25,032	52,718	100,199	121,500	144,500	204,300	221,300	249,659	307,000
Oregon	10,165	13,957	16,447	23,585	33,917	48,632	63,324	83,332	103,790	118,325	134,299	166,412
Pennsylvania	59,357	76,178	112,854	160,137	230,578	325,153	394,186	482,117	570,164	689,589	829,737	1,064,624
Rhode Island	8,565	10,294	12,331	16,362	21,406	37,046	36,218	44,833	50,375	54,957	66,466	85,480
South Carolina	10,000	11,500	14,500	15,000	19,000	38,322	55,492	70,143	93,843	90,546	95,978	128,656
South Dakota	14,481	14,578	20,929	28,784	44,271	67,158	90,521	104,628	120,395	119,274	125,238	131,720
Tennessee	12,490	14,860	19,769	22,738	30,000	48,000	63,000	80,422	101,852	117,025	135,716	173,365
Texas	35,187	54,362	64,732	90,000	197,687	213,334	251,118	331,310	427,693	467,616	526,238	688,899
Utah	2,576	4,021	2,253	9,177	13,507	24,076	32,273	35,236	42,578	47,523	49,156	66,025
Vermont	4,283	5,918	8,256	11,499	15,671	20,369	22,655	26,807	31,625	36,965	43,881	52,776
Virginia	5,760	9,022	14,002	21,357	35,426	55,000	72,228	94,120	134,000	141,000	169,000	219,092
Washington	13,990	24,178	30,253	38,823	60,734	91,337	117,278	148,775	*173,920	185,359	220,957	261,224
West Virginia	5.349	5,088	6,159	13,279	20,571	31,300	38,750	50,203	78,862	93,894	112,763	162,191
Wisconsin	24,578	34,646	53,161	79,791	115,637	164,531	196,844	236,981	293,298	341,841	388,044	457,271
Wyoming	1,300	1,584	2,428	3,976	7,125	12,523	16,200	21,371	23,926	26,619	30,637	39,831
Totals	1,010,399	1,248,056	1,768,963	2,494,912	3,584,567	4,970,671	6,105,588	7,596,503	9,206,141	10,505,630	12,299,770	15,222,658

Dec. 31, 1922		Dec. 31, 1923	
California	4.29	California	3.51
Iowa	4.90	Dist. of Columbia	4.24
Nebraska	4.97	Iowa	4.30
Dist. of Columbia	5.12	Nebraska	4.68
South Dakota	5.19	Kansas	4.80
Kansas	5.47	Nevada	4.93
Colorado	6.01	Oregon	4.98
Oregon	6.05	South Dakota	5.01
Nevada	6.12	Indiana	5.18
Indiana	6.36	Colorado	5.27

The 1923 figures were compiled on the basis of population figures as of Dec. 31, 1923, as estimated by the U. S. Bureau of Census.

Despite rapid strides made by the Southern States in use of cars and trucks, these States still are at the bottom of the list in registrations as related to population.

The 12 States having the greatest number of persons per vehicle all are in the South. In each of these, however, registrations are increasing a good deal more rapidly than is population.

Only 7 States last year failed to gain 10,000 vehicles or more over 1922, while 8 States showed an increase of more than 100,000.

The manufacturing States recorded good gains both numerically and proportionately in practically every instance. Steady progress in car and truck sales is apparent in these areas, without striking trends in any instances.

Every section of the country had a part in piling up the huge total of 1923 registrations, since each State passed its 1922 total by a good margin.

While the motor vehicle industry was busy amassing a stupendous number of new sales last year, motorcycle business continued its slow but steady decline. For some time past there has been evidence of a renewed merchandising vigor, but sales and registrations show no record of it as yet. Some really striking activity on the part of motorcycle builders seems necessary if the undertow of receding sales is to be stemmed.

In 1923 there were 176,630 motorcycles registered, as against 194,226 in 1922, a decrease of 17,596, or 9.06 per cent. This trend has been steady since 1919 and has been common to all parts of the country. The industry continues to export well over half of its output, 22,112 machines having been shipped abroad last year. In the meantime, conditions in the domestic field seem to have become less favorable. It is interesting to compare the 10 States having the highest automobile registration with those having the highest motorcycle registration. Here they are in order:

Cars and Trucks	Motorcycles
New York	New York
California	Pennsylvania
Ohio	Ohio
Pennsylvania	California
Illinois	Massachusetts
Michigan	New Jersey
Texas	Illinois
Indiana	Maryland
Iowa	Indiana
Missouri	Wisconsin

In a general way the lists are similar, although 4 States appear in the motorcycle column which are not in the car and truck column. It is significant that 2 of

Motor Vehicle Registration Statistics

States	Total Registration of Cars and Trucks	Passenger Cars	Trucks	Motorcycles	Total Fees
Alabama	126,642	112,797	13,845	599	$1,532,614
Arizona	48,741	42,176	6,565	392	281,670
Arkansas	111,946	100,758	11,188	300	1,698,000
California	1,100,283	1,056,756	43,527	14,694	10,604,755
Colorado	189,356	176,069	13,287	2,473	1,126,218
Connecticut	177,931	148,791	29,140	2,820	4,329,432
Delaware	29,977	24,709	5,268	467	625,000
District of Columbia	103,171	94,787	8,384	2,510	445,712
Florida	160,000	130,000	30,000	1,200	1,963,000
Georgia	173,794	151,325	22,469	1,011	2,156,406
Idaho	62,379	57,200	5,179	655	912,232
Illinois	969,331	847,005	122,326	7,612	9,470,818
Indiana	583,342	510,114	73,228	6,042	3,693,715
Iowa	576,398	539,454	36,944	3,047	8,827,062
Kansas	375,594	349,038	26,556	1,950	203,158
Kentucky	198,347	177,808	20,539	839	2,680,580
Louisiana	138,500	117,500	21,000	400	2,167,619
Maine	108,609	92,995	15,614	1,920	1,660,268
Maryland	209,938	197,364	12,574	7,455	3,462,374
Massachusetts	476,150	407,945	68,205	11,733	6,989,633
Michigan	730,658	657,148	73,510	4,165	10,500,786
Minnesota	448,187	399,404	48,783	3,220	7,317,469
Mississippi	104,400	93,960	10,440	114	1,166,923
Missouri	476,373	430,232	46,141	2,533	4,004,083
Montana	73,828	65,449	8,379	374	729,624
Nebraska	286,053	259,382	26,671	1,608	3,353,175
Nevada	15,700	12,400	3,300	90	155,000
New Hampshire	59,571	52,583	6,988	1,987	1,447,000
New Jersey	430,958	341,853	89,105	8,779	7,927,439
New Mexico	31,737	28,564	3,173	172	280,000
New York	1,214,642	966,386	248,256	22,985	19,862,441
North Carolina	247,612	226,288	21,324	1,300	6,642,503
North Dakota	109,244	105,957	3,287	645	760,444
Ohio	1,068,700	927,000	141,700	15,000	9,500,000
Oklahoma	307,000	288,424	18,576	823	3,380,000
Oregon	166,412	152,975	13,437	3,140	4,069,609
Pennsylvania	1,064,624	899,696	164,928	19,817	15,844,304
Rhode Island	85,480	69,753	15,727	1,606	1,440,257
South Carolina	128,656	116,537	12,119	561	902,608
South Dakota	131,720	121,164	10,556	471	1,949,376
Tennessee	173,365	154,181	19,184	751	2,049,653
Texas	688,899	618,208	70,691	3,346	5,647,663
Utah	66,025	57,460	8,565	766	834,190
Vermont	52,776	49,420	3,356	839	938,860
Virginia	219,092	191,043	28,049	2,416	3,200,161
Washington	261,224	222,479	38,745	3,714	3,898,597
West Virginia	162,191	154,524	7,667	1,353	2,608,508
Wisconsin	457,271	422,718	34,553	5,645	4,968,512
Wyoming	39,831	35,294	4,537	291	414,096
Total	15,222,658	13,455,073	1,767,585	176,630	$190,623,547

Percentage of Registration by States

	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923
Alabama	0.3	0.4	0.4	0.5	0.6	0.6	0.8	0.8	0.8	0.8	0.8	0.9
Arizona	0.2	0.2	0.3	0.3	0.6	0.4	0.4	0.4	0.4	0.3	0.3	0.4
Arkansas	0.2	0.2	0.3	0.3	0.4	0.6	0.7	0.7	0.7	0.6	0.7	0.8
California	8.0	4.9	7.0	6.6	6.5	6.1	6.0	6.3	6.2	6.4	6.9	7.3
Colorado	0.8	1.1	1.0	1.1	1.2	1.3	1.4	1.4	1.3	1.4	1.3	1.3
Connecticut	2.4	2.2	1.9	1.8	1.7	1.7	1.5	1.4	1.3	1.3	1.3	1.2
Delaware	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
District of Columbia	0.2	0.2	0.3	0.3	0.4	0.3	0.5	0.5	0.4	0.6	0.7	0.7
Florida	0.2	0.2	0.2	0.4	0.6	0.6	0.9	0.7	0.8	0.9	0.9	1.1
Georgia	1.9	1.5	1.2	1.0	1.3	1.4	1.6	1.7	1.6	1.3	1.2	1.2
Idaho	0.2	0.2	0.2	0.3	0.4	0.5	0.5	0.6	0.6	0.5	0.4	0.5
Illinois	6.8	7.6	7.4	7.3	6.9	6.8	6.4	6.3	6.2	6.4	6.4	6.4
Indiana	5.3	3.8	3.8	3.9	3.9	3.9	3.7	3.6	3.6	3.8	3.8	3.9
Iowa	5.8	6.0	6.3	6.1	5.5	5.1	4.6	4.8	4.7	4.4	4.0	3.8
Kansas	2.2	2.7	2.8	2.9	3.1	3.2	3.1	3.0	2.9	2.8	2.6	2.5
Kentucky	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.2	1.2	1.2	1.3
Louisiana	0.7	0.6	0.7	0.4	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.9
Maine	0.8	0.8	0.9	0.9	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.8
Maryland	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	0.2
Massachusetts	5.0	5.0	4.4	4.1	3.8	3.5	3.2	3.3	3.3	3.4	3.6	3.2
Michigan	3.9	4.4	4.3	4.6	4.5	4.9	4.3	4.3	4.5	4.5	4.7	4.8
Minnesota	2.9	3.0	3.8	3.7	1.3	1.2	3.3	3.4	3.4	3.1	3.1	3.0
Mississippi	0.3	0.2	0.3	0.4	0.7	0.7	0.8	0 6	0.7	0.6	0.6	0.7
Missouri	2.4	3.1	3.1	3.1	2.9	3.0	3 1	3.2	3 2	3.3	3.2	3.2
Montana	0.2	0.5	0.6	0.6	0.7	0.9	0.8	0.8	0.7	0.6	0.5	0.5
Nebraska	3.3	2.1	2.3	2.4	2.8	3.0	2.9	2.5	2.4	2.3	2.1	1.9
Nevada	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.1
New Hampshire	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
New Jersey	4.3	3.9	3.4	3.1	2.9	2.7	2.5	2.5	2.5	2.6	2.7	2.9
New Mexico	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
New York	10.6	10.8	9.6	9.4	8.9	8.2	7.6	7.5	7.3	7.7	8.1	8.0
North Carolina	0.6	0.8	0.8	0.8	0.9	1.1	1.2	1.4	1.5	1.4	1.5	1.7
North Dakota	0.9	1.0	0.9	1.0	1.1	1.3	1.2	1.1	1.0	0.9	0.8	0.8
Ohio	6.2	6.9	6.9	7.3	7.0	6.9	6.8	6.7	6.7	6.9	7.0	7.0
Oklahoma	0.6	0.6	0.8	1.0	1.5	2.0	2.0	1.9	2.2	2.1	2.0	0.2
Oregon	1.0	1.1	0.9	0.9	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.1
Pennsylvania	5.9	6.1	6.4	6.4	6.4	6.5	6.5	6.3	6.2	6.6	6.7	7.0
Rhode Island	0.8	0.8	0.7	0.6	0.6	0.7	0.6	0.6	0.5	0.5	0.5	0.6
South Carolina	1.0	0.9	0.8	0.6	0.5	0.8	0.9	0.9	1.0	0.9	0.8	0.9
South Dakota	1.4	1.2	1.2	1.2	1.2	1.3	1.5	1.4	1.3	1.1	1.0	0.9
Tennessee	1.2	1.2	1.1	0.9	0.8	1.0	1.0	1.0	1.1	1.1	1.1	1.2
Texas	3.5	4.4	3.7	3.6	5.5	4.3	4.1	4.4	4.6	4.4	4.3	4.6
Utah	0.3	0.3	0.1	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.5
Vermont	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4
Virginia	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.2	1.5	1.3	1.4	1.5
Washington	1.4	1.9	1.7	1.6	1.7	1.8	1.9	2.0	1.9	1.8	2.0	1.8
West Virginia	0.5	0.4	0.3	0.5	0.6	0.6	0.6	0.7	0.9	0.9	0.9	1.1
Wisconsin	2.2	2.8	3.0	3.2	3.2	3.3	3.2	3.1	3.2	3.3	3.1	3.1
Wyoming	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.2	9.3	9.2	0.3

these 4 are States in which are located the two largest motorcycle manufacturing plants. Intensive cultivation of the territory immediately surrounding the factories has produced a relatively large number of sales.

The absence of such agricultural States as Iowa and Texas from the motorcycle list is an indication of the lack of representation in small towns and in agricultural areas. In such places is located a vast majority of the automobile dealers and a relatively small percentage of the motorcycle agencies.

Persons per Motor Vehicle Dec. 31, 1923

California	3.51	Florida	6.61	Massachusetts	8.52
District of Columbia	4.24	Vermont	6.68	Pennsylvania	8.60
Iowa	4.30	Illinois	7.05	New York	8.97
Nebraska	4.68	Oklahoma	7.10	West Virginia	9.65
Kansas	4.80	Maine	7.17	North Carolina	10.92
Nevada	4.93	Maryland	7.22	Virginia	11.00
Oregon	4.98	Texas	7.23	New Mexico	11.78
South Dakota	5.01	Missouri	7.25	Kentucky	12.44
Indiana	5.18	Utah	7.28	Louisana	13.41
Colorado	5.27	Rhode Island	7.37	South Carolina	13.65
Wyoming	5.37	New Hampshire	7.53	Tennessee	13.84
Washington	5.53	Idaho	7.63	Arkansas	16.30
Michigan	5.58	Delaware	7.73	Mississippi	17.13
Minnesota	5.62	New Jersey	7.93	Georgia	17.34
Ohio	5.77	Arizona	7.94	Alabama	20.87
Wisconsin	6.02	Connecticut	8.37		
North Dakota	6.18	Montana	8.39	United States	7.32

Gain in Car and Truck Registration, 1922-1923

California	238,478	West Virginia	49,428	Rhode Island	19,014
Pennsylvania	234,887	Kansas	48,400	District of Columbia	17,746
New York	212,349	Kentucky	44,326	Utah	16,869
Ohio	209,196	Maryland	44,314	Maine	16,070
Illinois	183,141	Florida	44,109	New Hampshire	11,278
Texas	162,661	Washington	40,267	Montana	11,179
Michigan	151,678	Tennessee	37,649	Arizona	10,707
Indiana	113,403	Alabama	36,590	North Dakota	10,192
Massachusetts	90,919	Louisiana	36,216	Wyoming	9,194
New Jersey	89,332	South Carolina	32,678	Vermont	8,895
Missouri	83,404	Oregon	32,183	Idaho	8,505
Iowa	76,250	Nebraska	29,399	South Dakota	6,482
Wisconsin	69,227	Georgia	28,210	New Mexico	6,264
Minnesota	67,630	Mississippi	27,399	Delaware	5,417
North Carolina	65,062	Colorado	27,028	Nevada	3,053
Oklahoma	57,341	Arkansas	25,521		
Virginia	50,092	Connecticut	23,256	Total	2,922,888

Percentage Gains in Registration, 1922-1923

West Virginia	43.80	California	27.67	Vermont	20.25
Alabama	40.65	Maryland	26.77	Georgia	19.40
Florida	38.00	Michigan	26.15	Washington	18.23
North Carolina	35.65	New Jersey	26.15	Wisconsin	17.83
Mississippi	35.55	Ohio	24.67	Montana	17.82
Louisiana	35.50	New Mexico	24.57	Minnesota	17.78
Utah	34.30	Indiana	24.15	Maine	17.30
South Carolina	34.17	Nevada	24.15	Colorado	16.63
Wyoming	33.30	Oregon	23.96	Idaho	15.78
Texas	30.90	Massachusetts	23.51	Iowa	15.24
Virginia	29.63	Illinois	23.50	Connecticut	15.04
Arkansas	29.53	New Hampshire	23.33	Kansas	14.80
Kentucky	28.75	Oklahoma	22.95	Nebraska	11.44
Rhode Island	28.60	Delaware	22.07	North Dakota	10.30
Pennsylvania	28.30	Missouri	21.24	South Dakota	5.17
Arizona	28.12	New York	21.23		
Tennessee	27.77	District of Columbia	20.38	Gain U. S.	23.80

Motorcycle Registrations 1919-1923

	1919	1920	1921	1922	1923
Alabama	1,103	1,035	805	638	599
Arizona	596	542	440	425	392
Arkansas	**	**	192	237	300
California	28,028	20,047	17,603	16,300	14,694
Colorado	3,636	3,364	2,868	2,770	2,473
Connecticut	4,495	6,543	5,589	4,386	2,820
Delaware	699	674	541	427	467
District of Columbia	2,412	519	2,487	2,494	2,510
Florida	1,412	1,275	1,296	1,456	1,200
Georgia	1,722	1,688	1,338	1,000	1,011
Idaho	731	764	744	703	655
Illinois	10,920	10,597	7,104	8,156	7,612
Indiana	8,995	8,823	7,524	6,598	6,042
Iowa	3,035	4,000*	3,897	3,569	3,047
Kansas	3,589	2,972	2,271	2,315	1,950
Kentucky	1,503	1,543	1,185	1,042	839
Louisiana	490*	500	498	509	400
Maine	1,608	1,566	1,525	1,321	1,920
Maryland	5,872	7,332	7,847	7,579	7,455
Massachusetts	13,698	15,143	12,048	11,675	11,733
Michigan	7,875	8,011	6,195	5,163	4,165
Minnesota	6,389	1,158	3,500	3,240	3,220
Mississippi	120*	194	375	109	114
Missouri	4,131	3,954	3,609	2,792	2,533
Montana	847	675	472	397	374
Nebraska	2,500	2,000	1,866	1,856	1,608
Nevada	125	141	130	112	90
New Hampshire	2,632	2,542	2,358	1,880	1,987
New Jersey	11,416	11,041	9,724	9,284	8,779
New Mexico	200	219	214	163	173
New York	28,561	29,453	26,998	25,175	22,985
North Carolina	1,459	1,418	1,276	1,190	1,300
North Dakota	901	898	810	766	645
Ohio	20,444	26,956	23,026	21,256	15,000
Oklahoma	1,310	1,320	1,013	952	823
Oregon	3,570	3,516	3,164	3,206	3,140
Pennsylvania	25,760	23,981	21,111	20,159	19,817
Rhode Island	2,301	2,225	1,780	1,459	1,606
South Carolina	869	908	756	605	561
South Dakota	888	777	682	660	471
Tennessee	1,133	1,151	1,043	861	751
Texas	3,990	4,293	3,905	3,410	3,346
Utah	1,185	1,114	909	725	766
Vermont	800	946	965	856	839
Virginia	2,520	2,233	2,200	2,931	2,416
Washington	5,050	4,915	3,763	3,846	3,714
West Virginia	994	1,659	1,539	1,361	1,353
Wisconsin	7,223	8,002	6,423	5,918	5,645
Wyoming	353	327	322	304	291
Total	240,090	234,954	207,930	194,226	176,630

*Estimated. **No data available.

Balloon Tires and Four-Wheel Brakes Chief Car Design Changes

CURRENT specifications of American passenger cars as compared to those of last year show that many concerns have adopted four-wheel brakes and balloon tires as optional equipment. Those who list these features as standard or optional equipment at extra cost amount to 29.7 per cent of the total in respect to four-wheel brakes and 30.1 per cent in respect to balloon tires. It is reasonable to expect, however, that many cars which have these items as optional equipment this year will have them as standard next year.

Ninety-five makes and 120 models of chassis are listed this year as compared to 106 makes and 156 models last year and 123 makes and 159 models the year before. This certainly shows a trend toward greater simplicity and indicates also that a larger proportion of manufacturers are concentrating on the production and sale of a single chassis model. There are also some evidences of a determination to decrease the number of body models offered.

TWELVE-CYLINDER engines have disappeared entirely from the list and there is a slight percentage reduction in eights. Fours have also seen a further reduction from 22.1 to 19.5 per cent of the total, so that the six has increased its predominance from 66.9 to 70.3 per cent of the total. In this connection it must be remembered, however, that a percentage comparison on the basis of total production would show an entirely different lineup, with the four-cylinder engine leading by a very wide margin due to the exceedingly large production of Ford, Chevrolet, Overland and other low priced cars.

The average bore of 3.43 in. and average stroke of 4.81 in. are precisely the same as they were last year; in fact, there has been practically no change in this respect since 1917. Average piston displacement has increased from 257.3 to 258.1 cu. in. due to the slightly larger average number of cylinders.

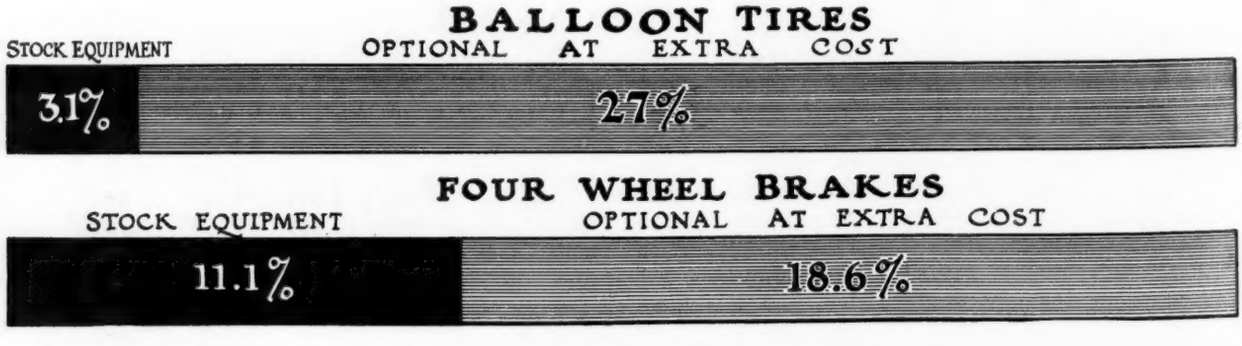
A slightly greater percentage of models now have the gearset mounted amidship. This gain, from 10.6 to 10.8 per cent, is due chiefly to a decrease in the proportion of models with gearset made integral with the torque tube, but partly to a slight falling off in the percentage of unit powerplants. This change is said to be partly in the interest of greater accessibility and partly to facilitate ready assembly.

SEMI-FLOATING axles have continued to gain at the expense of full-floating and three-quarter-floating types. They are used now on 61.9 per cent of all models.

Thermo-syphon cooling, which in 1916 and 1917 was employed on nearly 40 per cent of all models, has continued to decline slowly in popularity and has lost further ground since last year. Over 75 per cent of models now have pump circulation. Air cooling, which showed signs of becoming more popular last year, has declined in the percentage tabulation through withdrawal of two models then listed. Steam cooling, which possesses promising possibilities, has yet to make headway in commercial applications on passenger cars.

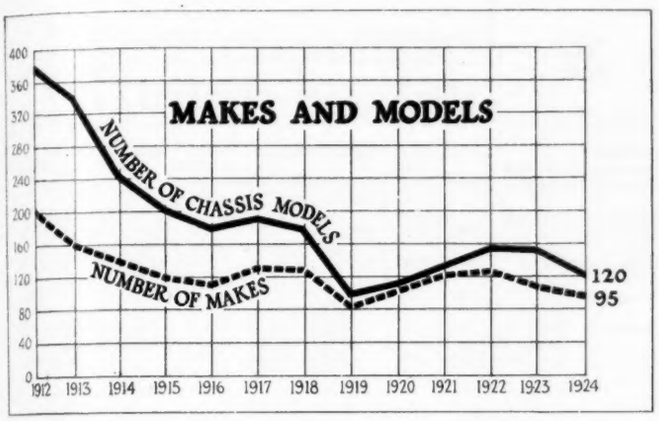
IN 1912 the average nominal diameter of tires used on phaeton models was 33.25 in. Since then it has been reduced gradually but steadily until it is now approximately 32 in. Average nominal width of tire, which was 4.26 in. in 1912, decreased to a minimum of 4.07 in. in 1916 and since gradually has increased until it is now 4.39 in. Whether there will be a continuation in the decrease of nominal tire diameters in the future remains to be seen, but with the coming of the balloon tire there undoubtedly will be a decrease in wheel diameters and an increase in average width of tire.

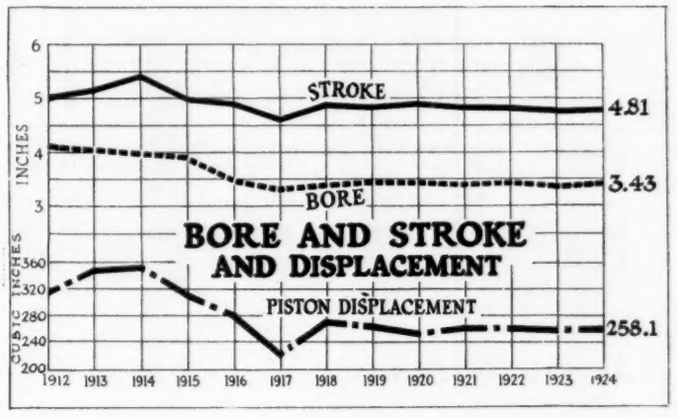
Per Cent of Models with Balloon Tires and Per Cent with Four-Wheel Brakes

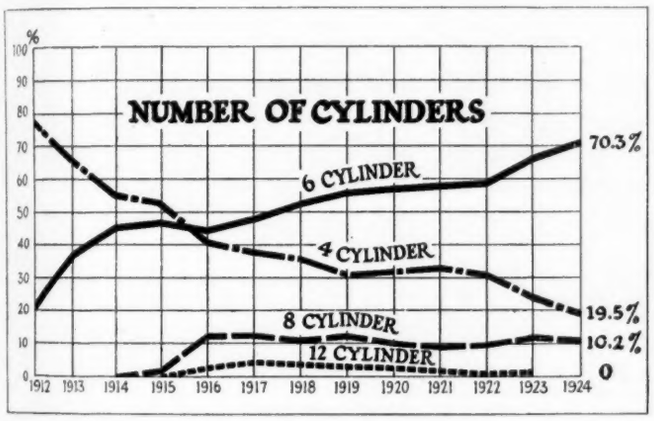


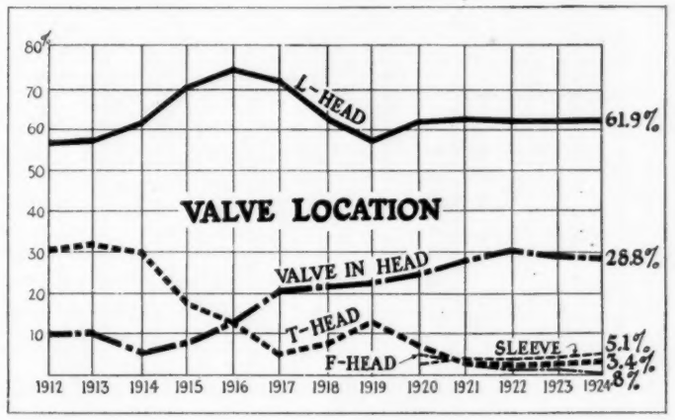
Trends in American Passenger Car Design

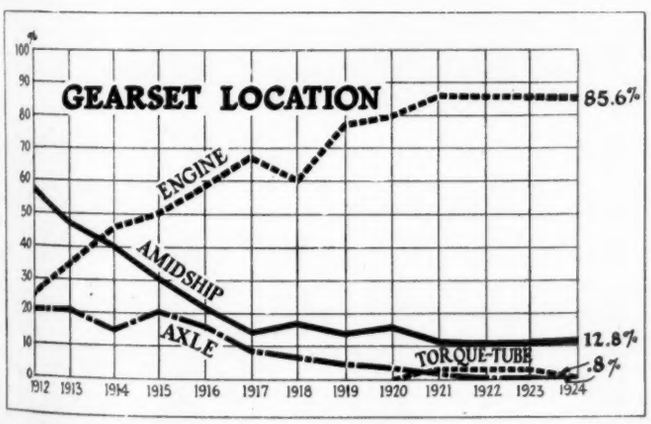
(Percentages computed on basis of total number of models)

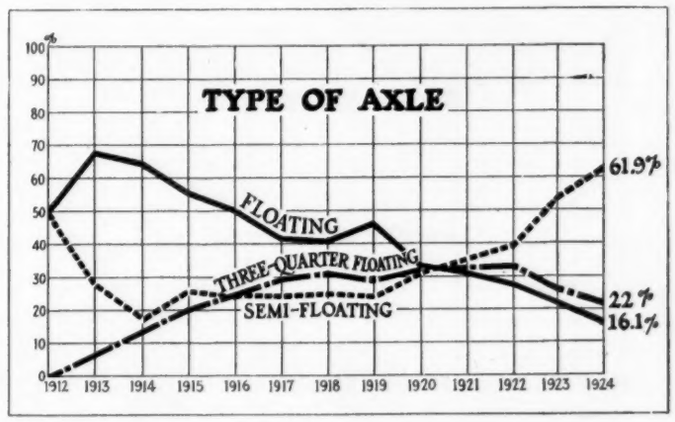


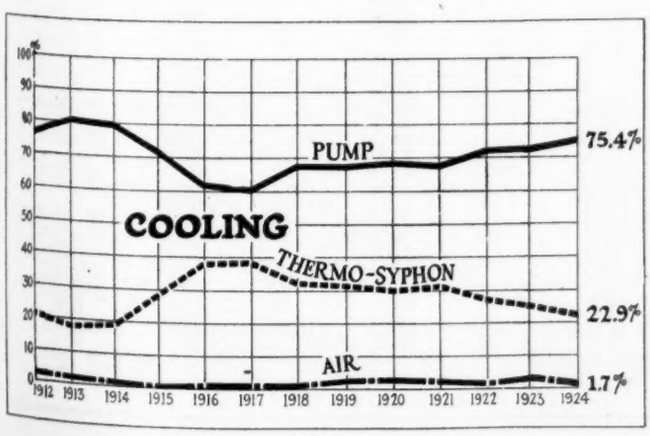


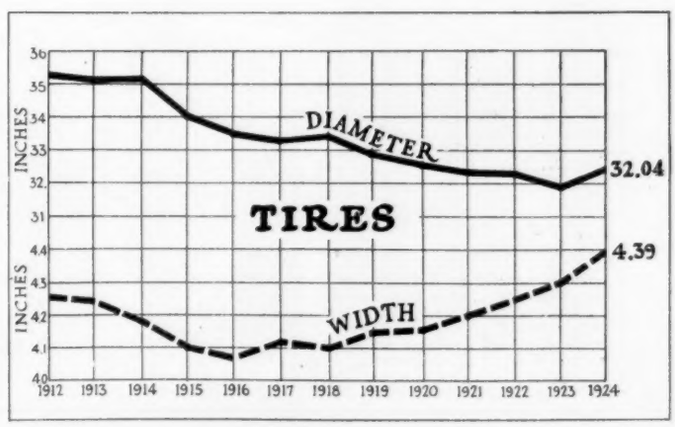












American Passenger Car Prices

For detailed Engine and Chassis Specifications see Pages 396 to 403

NAME AND MODEL	PRICES							Wheel Base (Ins.)	Tire Size (Ins.)††
	OPEN MODELS			Sport Models	CLOSED MODELS				
	2-3 Pass.	4-5 Pass.	6-7 Pass.		2-3 Pass.	4-5 Pass.	6-7 Pass.		
American.....D-66	$1950	$1695	$1760	$1850d	d2195‡	$2350	$2550d	127	33x4½
Anderson.....41	.....	1195	.....	1445e	1425	1495	d1895p	115	32x4*
						1695			
Anderson.....50	.....	.....	1595	.....	.....	.....	.....	122	32x4*
Apperson.....6	.....	1395	.....	1660d	.....	1995	.....	120	32x4*
Apperson.....8-23-S	.....	2485	2485	.....	.....	3385	3385	130	33x5
Auburn.....6-43	.....	1095	d1295p	1365d	1695d	1595	1845d	114	31x4*
Auburn.....6-63	.....	1695	.....	1935d	.....	2245‡	2445	122	32x4½*
								124	
Barley.....6-50	.....	1395	.....	1495d	1685d	1850	.....	118	32x4*
						2250p			
Buick.....1924	935	965	.....	800g	1395e	1495	.....	109	31x4
Buick.....1924	1275	1295	.....	1135g	1995e	1695	.....	120	32x4
						2095			
Buick.....1924	1385g	.....	1565	1675a	1945e	2235‡	2285	128	32x4½
				1725d		2385d	2795‡		
Cadillac.....V 63	3085	3085	3085	.....	3875	3950	3585	132	33x5
					3275	4150	4600§		
Case.....X	1750	1790	.....	2230d	2480e	2575	.....	122	32x4½
Case.....Y	.....	.....	2475	.....	.....	.....	3325	132	33x5
Chalmers.....V	.....	1185	.....	1335d	.....	1535	.....	117	32x4
Chalmers.....V	.....	.....	1295	.....	.....	.....	2095	122	33x4½
Chandler.....Six	1595	1485	1635	1785e	1895d	1745	2385	123	32x4*
		1685			2095 f	2270	2995§		
Chevrolet....Superior	490	495	395g	.....	610	795	725c	103	30x3½
Chrysler.....Six	1525	1335	1395d	.....	d1795‡	1625	1895d	.....	29x4½
Cleveland.....42	1085	1015	.....	1145d	1245	1295	1495d	112½	31x4*
				1295d	1345	1395	1445d		
Cole.....Master	2175	2175	2175	2475	2750e	3075	d3075‡	127¼	33x5*
Columbia.....Big Six	....	1475	.....	.....	.....	1995	.....	115	32x4*
Columbia....Light Six	995	995	.....	1195d	1395	1495	1650d	115	31x4*
Courier.....	1395p	1295	.....	1595e	1495	2195p	1895‡	116	32x4
Crawford.....23-6-70	.....	3100	3100	.....	.....	.....	4500	138	33x4½
Crawf'rd-Dagmar.6-70	.....	.....	.....	3500e	.....	4500	.....	138	33x5
Cunningham.....V4	.....	5800	6300	.....	.....	7650	.....	132	33x5
								142	
Davis.....71	1295	1495	.....	1495e	.....	1595	1795e	115	31x4*
Davis.....81	.....	.....	.....	.....	.....	.....	2195	118	31x4
Dodge Brothers.....	865	895	.....	1060d	1035	1250	1545d	116	32x4*
					1385	1535e			
Dorris.....6-80	.....	3950	3950	4150e	4985e	5550	5800	136	32x6
Dort.....27	.....	1095	.....	1245e	1535d	1595	d1535‡	115	31x4*
Duesenberg.Straight 8	6500	6250	6750	6500e	d7800‡	7500	7800	134	33x5
Dupont.....C	1990	1990	.....	.....	2850	2850	.....	124	32x4½
Durant.....A-22	890	850	.....	1065d	1365	1365	.....	109	31x4
						1465			
Eagle.....6	.....	820	.....	.....	.....	.....	.....	115	30x3½
Elcar.....4-40	.....	995	.....	1195d	.....	1265‡	p1625d	112	31x4*
Elcar.....6-50	.....	1220	.....	.....	.....	1650	1490‡	113	31x4
Elcar.....6-60	.....	1395	.....	1595d	1995d	1995	p2195d	118	32x4*
Elgin.....25	.....	1895	.....	.....	2145	2345	d3000‡	118	32x4½*
Essex.....6	.....	850	.....	.....	.....	975	.....	110½	31x3¾
Flint.....	1295	1295	.....	1295	1895e	2085	.....	120	32x4½*
Ford.....T	265r	295s	230r	.....	525	685	590d	100	30x3½
Franklin.....10-B	.....	1950	.....	.....	2750c	2250	$2950d	115	32x4½*
					2850‡	2850			
Gardner.....Series 5	895	895	995d	1095	1145	1445	‡1335d	112	32x4
Gray.....	.....	520	.....	.....	.....	.....	.....	100	30x3½
Gray.....	.....	630	.....	720d	735	875	.....	104	30x3½
H.C.S.....Series 4	2250	2250	.....	.....	.....	.....	.....	120	32x4½
H.C.S.....Series 6	....	2650	.....	.....	.....	3350	.....	126	32x4½*
Hanson.....66	1395	1395	.....	1495e	.....	2195	.....	121	32x4
Hatfield.....6-55	.....	1775	.....	.....	2175e	2350	.....	121	32x4
Haynes.....60	.....	1295	.....	1695b	d1795‡	1845	2295d	121	32x4½
		1395		1750d		1895	2495d		
Hudson.....Super 6	.....	1350	1425	.....	1475d	1895	.....	126	31x4½
Hupmobile...Series R	1175	1175	.....	1195a	1445	1750	.....	115	32x4
				1195d	1425d	1595			
Jewett.....Six	1195	1065	960g	1220d	‡1325d	1495	.....	112	31x4*
						1695p			
Jordan.....MX	1850	1775	.....	.....	2385e	2385‡	.....	120	32x4*
Jordan.....H&L	.....	2095	.....	.....	.....	2585	2785	124½	32x4½*
Kelsey.....G	.....	.....	.....	1150d	.....	1450	.....	112	32x4
King.....L	1595	1595	1595c	1895e	2200c	1995	2400	120	32x4½
King.....K	1795	1795	1795e	1995e	2500	2295	2625	124	32x4½
Kissel.....55	2085	1585	.....	1985e	2485e	2585‡	.....	121	32x4*

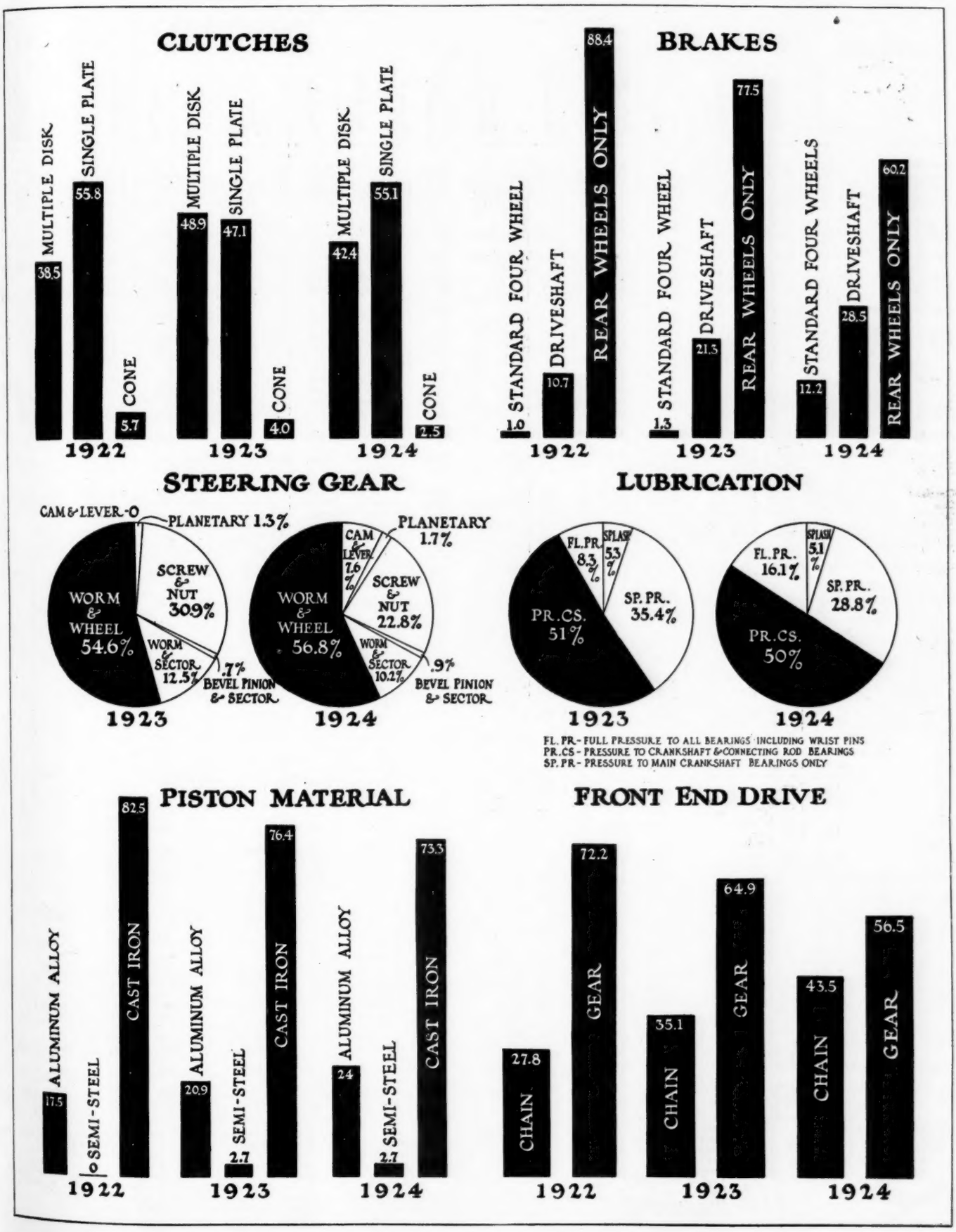
NAME AND MODEL	PRICES							Wheel Base (Ins.)	Tire Size (Ins.)††
	OPEN MODELS			Sport Models	CLOSED MODELS				
	2-3 Pass.	4-5 Pass.	6-7 Pass.		2-3 Pass.	4-5 Pass.	6-7 Pass.		
LaFayette.....	5000	5000	5000	4200g	.....	6300	6500	132	33x5*
Lexington....Concord	.....	1395	.....	.....	.....	1845	.....	119	32x4*
Lexington.MinuteMan	1895	1895	1995	2145d	2395‡	2295	.....	123	32x4½*
		2195	2295			2695			
Liberty.....6-E	.....	1575	.....	.....	.....	.....	.....	117	32x4
Lincoln.....	3800	3800e	3800	.....	4600e	4400	4900	136	33x5*
					5200	4700	5100§		
Locomobile.Series 8..	8090	7900	7900	.....	.....	11750	11600	142	35x5
						12200	12200		
Marmon.....34	2300g	2785	2785	2985a	.....	3585	4285§	136	32x4½*
				2985c		3985	3985		
Maxwell.....25	795	795	.....	895b	935	1195	1585d	109	31x4
				975d		1295	1045d		
McFarlan.....SV	2500	2500	.....	.....	3000	3000	.....	127	32x4½
McFarlan.....TV	5400	5600	5700	.....	6720	6600e	6810	140	33x5
						6720	6900§		
Moon.....U6-40	1295	1295	.....	1495d	1685e	1695	.....	115	31x4*
						1895			
Moon.....6-58	.....	.....	1785	2150	.....	2585	2485	128	32x4½*
Moon.....6	.....	995	.....	.....	.....	.....	.....	113	31x4*
Nash.....691-3-6-7	1240	1240	1050g	1645e	2090e	1640	2040	121	33x4
						2090			
Nash.....692-4-5-8	.....	.....	1390	.....	.....	1890	2190	127	34x4½
Nash.....41-8	915	935	.....	1195d	.....	1445	.....	112	33x4
						1275			
National.....BB	2475	2475e	2375	2485d	.....	3250	3285	130	32x4½
			3150			3725			
Oakland.....6-54	995	995	.....	1095a	1195	1445	.....	113	31x4
				1095d		1395			
Oldsmobile 30	795	795	.....	915d	985	1075	.....	110	31x4
						1135			
Overland.....91	495	495	.....	395g	750	795	695d	100	30x3½
Overland.....92	.....	695	.....	.....	.....	.....	.....	106	30x3½
Packard.....126	2585	2585	2350g	2750c	3275e	3375	3450	126	33x4½
Packard.....133	.....	.....	2785	2450g	.....	3625 f	3675 f	133	33x4½
Packard "Eight"...136	3850e	3650	.....	4550e	4725	d4700§	136	33x5	
Packard "Eight"...143	.....	.....	3850	.....	.....	4900 f	4950§	143	33x5
Paige.....6-70	.....	1795	1795	.....	d2395‡	2595	2595	131	33x4½*
		1995p	1995p			2770p	2770p		
Paterson.....23-6-52	1550	1390	1425	1465d	2395d	2395	.....	120	32x4½
Peerless.....Six	1985	1985	.....	.....	.....	2675	.....	126	32x4½
Peerless.....66	.....	2690	2750	2260g	3300	3390	3840	128	33x5*
						3690	4090§		
Pierce-Arrow.....33	5250	5250	5250	.....	6800	6900	6800	138	33x5
						7000f	7000		
Pilot.....6-56	.....	1695	1745	1745	2445	2495‡	.....	126	32x4½
Premier.....6-D	2535	2585	2585d	2635d	.....	3385	3585	126½	32x4½
R & V Knight.....11	.....	2300	2350	2400c	3000d	3050	3250	124	32x4½
Reo.....T6	.....	1335	.....	1545d	.....	1875	d2235‡	120	32x4*
						1985			
Revere.....M	3200e	3200	.....	3200e	.....	4000	.....	131	32x4½
Rickenbacker.....B	1645	1595	.....	.....	2035	2135	.....	117	32x4*
Roamer.....6-54-E	2655	2485	2685	2750e	3285	3585	3585d	118	32x4½
						3950§	4000		
Roamer.....6-54-E	.....	.....	.....	.....	.....	4250p	3950	138	32x4½
Roamer.....4-75-E	3685	3485	3800	3650e	.....	4650p	.....	128	32x4½
	3785								
Rollin.....	.....	895	.....	975	1175	1275	.....	112	31x5¼
Rolls-Royce.....40-50	11400	10900	11450	.....	.....	12800	12850	143½	33x5
						13500	12900		
Sayers Six.....GL	1615	1615	.....	.....	2645d	2615	.....	136	33x5
Seneca.....50c & 51c	985	985	.....	.....	.....	.....	.....	112	31x4
Stanley.....740	2750	2750	2750	2425g	.....	3585	3985	130	32x4½
Star.....	490	490	.....	640d	640	785	p935d	102	30x3½
Stearns-Knight..SKL4	1750c	1750	1445g	.....	c1995p	2350	d2195‡	119	33x4½
Stearns-Knight.....6	2395	2395	2495	2195g	3395	3395	3395	130	33x5
					3150p	3200‡			
Stephens.....10	1295	1295	.....	.....	1595d	1995	.....	117	32x4
Stephens.....20	.....	1750	1595	1850c	.....	.....	2250	124	33x4½
Sterling-Knight.....	.....	1985	.....	2200c	.....	2800	d2750p	125	32x4½
Studebaker..Light Six	975	995	845g	.....	1195	1485	1395d	112	31x4
Studebaker..Spec'l Six	1325	1350	.....	1100g	1895d	1985	.....	119	32x4
Studebaker....Big Six	1450g	.....	1750	1837d	.....	2495	2685	126	33x4½
Stutz.....690	1995	1995	.....	2265d	.....	2550	.....	120	32x4½
Stutz.....KLDH	2450	2765	2640	2765a	3250	3490	.....	130	32x4½
				3115c					
Stutz...Speedway 695	.....	2650	2685	.....	3600f	3350	3500	130	32x4½*
Templar.....	.....	1895	.....	1995b	2495	2595	.....	122	33x4
Velie.....56	.....	1095	.....	.....	.....	1545	.....	118	32x4*
Velie.....58	1275	1275	.....	1525b	1485d	1895	1945‡	118	32x4*
				1565d		2095p			
Westcott.....48	.....	.....	1990	2190f	.....	.....	.....	125	32x4½
Westcott.....44	.....	1690	1590c	.....	2490†	2490	.....	120	32x4½*
					1795				
Westcott.....60	.....	1690	.....	1840	2190	2290	2090	.....	32x4½*
Wills Ste. Claire..A-68	.....	2475	.....	.....	d3375‡	3375	3575	121	32x6
Wills Ste. Claire..B-68	2875	2875	2875	.....	3675c	3775	3800	127	32x6
						3800			
Willys-Knight.....64	1175	1175	.....	1635e	1550c	1895p	.....	118	32x4
					1450c	1795			
Willys-Knight.....67	.....	.....	1325	.....	.....	.....	1995	124	32x4½
Winton.....40	3400	3600	3400	.....	4250c	4450p	4550	132	33x5
							4700§		

a—2 Passenger
b—3 Passenger
c—4 Passenger
d—5 Passenger
††—On Standard Phaeton Models
‡—Brougham
e—6 Passenger
f—7 Passenger
g—Chassis Price
p—Sport Model
§—Limousine

*—Balloon Tires optional at extra cost.
r—Price without starter and demountable rims. Price, complete, $350.
s—Price without starter and demountable rims. Price, complete, $380.

Progress of Car Design Shown by Trend Studies

(Percentages computed on basis of total number of models)



American Passenger Car

For Complete Engine Specifications, see Pages 400-403

MAKE & MODEL	Wheelbase‡‡	Tire Size‡‡	CLUTCH: Make and Model	CLUTCH: Type	CLUTCH: Number of Driving and Driven Disks	CLUTCH: Facing Sizes: Maximum (Ins.)	CLUTCH: Facing Sizes: Minimum (Ins.)	GEARSET: Make and Model	GEARSET: Location	GEARSET: Number of Forward Speeds	UNIVERSALS: Front: Type & Make	UNIVERSALS: Rear: Type & Make	REAR AXLE: Make and Model	REAR AXLE: Type	REAR AXLE: Final Drive	REAR AXLE: Gear Ratio‡‡	Propulsion Taken By	Torque Taken By	Road Clearance (Ins.) With Standard Tire Size	Differential Make
American.....66	127	33x4½	B&B. DX-10...	SP....	2-1	9⅞	6¾	B-L.....	Eng...	3	m-Har..	m-Har..	Sal.....	FF...	SB....	5.10	Sp....	Sp....	10	Sal.
Anderson.....41	115	32x4*	B&B. DX-141..	SP....	2-1	9⅞	6¾	Dur. 0-4700...	Eng...	3	f-Goo...	f-Goo...	Sal. C.....	½F...	SB....	4.75	Sp....	Sp....	10	Sal.
Anderson.....50	122	32x4	B&B. DX-141..	SP....	2-1	9⅞	6¾	Dur. 0-4700...	Eng...	3	f-Goo...	f-Goo...	Sal. A.....	¾F...	SB....	4.50	Sp....	Sp....	10	Sal.
Apperson.....6	120	{32x4* 32x4½*	Roc. CL.....	SP....	2-1	9⅞	6⅞	Mec. MU.....	Eng...	3	m-Thi...	m-Thi...	Col. 12000.....	½F...	TB...	5.10	Sp....	Sp....	9	B-L-C
Apperson.....8	130	33x5	Own.....	MDD.	10-	10¾	7¼	Own.....	SeU...	3	m-Thi...	m-Thi...	Own.....	½F...	SB....	4.25	Sp....	Sp....		Own
Auburn.....6-63	{124 122	32x4½	B&B. DX-10...	SP....	2-1	9⅞	6¾	War. T-64J....	Eng...	3	m-Thi...	m-Thi...	Ccl. 12002.....	½F...	SB....	4.63	Sp....	Sp....	10¾	B-L-C
Auburn.....6-43	114	31x4	B&B. DX-10	SP....	2-1	9⅞	6¾	War. T-64J....	Eng...	3	m-Uni...	m-Uni...	Col. 12001.....	½F...	SB....	4.63	Sp....	Sp....	10¼	B-L-C
Barley.....6-50	118	32x4	B&B. DX-10...	SP....	2-1	9⅞	6¾	Ful. F.....	Eng...	3	f-M&E..	f-M&E..	Col. 12000.....	¾F...	SB....	5.10	Sp....	Sp....		B-L-C
Bay State.....1-2	{121 128	32x4	B&B. DX-10...	SP....	2-1	9⅞	6¾	Det. KY.....	Eng...	3	m-Spi...	m-Spi...	Col. 32000.....	¾F...	SB....	4.90	Sp....	Sp....	9½	B-L-C
Brewster.....41-91	125	{34x4½ 32x4½	Own.....	Co....	1-1	15¼	13⅞	Own.....	SeU...	3	f-Own...	m-Own..	Own.....	FF...	SB....	4.25	{TT.. RR..	{TT.. SP..	9	Own
Buick.....4	109	31x4	Own.....	MDD.	5-4	7⅝	5⅞	Own.....	Eng...	3	m-Own..	None...	Own.....	¾F...	SB....	4.70	TT..	TT..		Own
Buick.....6	{128 120	32x4½ 32x4	Own.....	MDD.	6-5	7⅝	5⅞	Own.....	Eng...	3	m-Own..	None...	Own.....	FF...	SB....	{4.54 4.74	TT..	TT..		Own
Cadillac.....63	132	33x5	Own.....	MDD.	8-7	7⅝	⅝‡	Own.....	Eng...	3	m-Spi...	m-Spi...	Own.....	FF...	SB....	4.50	Sp....	TA....	8½	Own
Case.....X	122	32x4½	Own.....	MDD.	4-3	8⅛	8⅛	Own.....	Eng...	3	f-Sne....	f-Sne....	Col. 33004.....	½F...	SB....	4.90	Sp....	Sp....	9½	B-L-C
Case.....Y	132	33x5	Own.....	MDD.	5-4	8⅛	8⅛	Own.....	Eng...	3	f-Sne....	f-Sne....	Col. 50051.....	¾F...	SB....	4.45	Sp....	TA....	10	B-L-C
Chalmers.....Y	{122 117	33x4½ 32x4	Mec. 10.....	SP....	.....	.....	.....	War.....	Eng...	3	m-Mec..	m-Mec..	Tim. Spe.....	½F...	SB....	5.10	Sp....	Sp....	10	Tim.
Chandler.....6	123	{32x4* 33x4½*	B&B. DX-10...	SP....	2-1	9⅞	6¾	Own.....	Eng...	3	f-Own...	f-Own...	Own.....	FF...	SB....	4.45	Sp....	Sp....		Own
Chevrolet....Superior	103	30x3½	Own.....	Co....	1-1	12⅜	11⅜	Own.....	Eng...	3	m-Own..	None...	Own.....	½F...	SB....	3.77	Sp....	TT....	9¾	Own
Chrysler.....6	.....	{29x4½ 30x5	Own.....	MDD.	4-4	7⅝	5⅞	Own.....	Eng...	3	m-Uni...	m-Uni...	Own.....	½F...	SB....	4.60	Sp....	Sp....	9	Own
Cleveland.....42	112½	31x4*	B&B. DX-10...	SP....	2-1	9⅞	6¾	Own.....	Eng...	3	m-Mec..	m-Mec..	Own.....	½F...	SB....	4.90	Sp....	Sp....	9¾	Own
Cole.....1924	127¾	33x5*	Nor. 311.....	MDD.	6-5	9½	7½	Nor. 311.....	Eng...	3	m-Spi...	m-Spi...	Col. 50000.....	FF...	SB....	4.70	Sp....	Sp....	11	B-L-C
Columbia.....L-6	115	31x4*	B&B. DX-10...	SP....	2-1	9⅞	6¾	Dur. 05000.....	Eng...	3	m-Spi...	m-Spi...	Tim. 5002.....	½F...	SB....	4.80	Sp....	Sp....		Tim.
Columbia.....B-6	115	32x4*	B&B. DX-10...	SP....	2-1	9⅞	6¾	Dur. 2500B.....	Eng...	3	m-Spi...	m-Spi...	Tim. 5152.....	½E...	SB....	4.75	TA....	TA....		Tim.
Courier.....	116	32x4	B&B. DX-10...	SP....	2-1	9⅞	6¾	Mun. T-25A....	Eng...	3	f-Fle....	f-Fle....	Ccl. 10000.....	¾F...	SB....	5.50	Sp....	Sp....		Col.
Crawford-Dagmar.....	138	{33x4½ 33x5	B-L. 35.....	MDD.	5-5	8⅛	6¼	B-L. 35.....	Eng...	3	m-Spi...	.....	Tim. 5310.....	½F...	SB....	.....	Sp....	Sp....		Tim.
Cunningham.....V	{132 142	33x5	Own.....	MDD.	7-7	8⅛	8⅛	Own.....	Eng...	4	f-Sne....	f-Sne....	Tim. 5712.....	FF...	SB....	4.23	Sp....	TA....	9½	Tim.
Daniels.....23-38	{132 138	33x5	Own.....	MDD.	1-6	.....	.....	Own.....	Eng...	3	m-Spi...	m-Spi...	Tim. 5762.....	FF...	SB....	4.23	Sp....	TA....		Tim.
Davis.....71	115	31x4*	B&B. DX-10...	SP....	2-1	9⅞	6¾	War. T-64A...	Eng...	3	m-Pet...	m-Pet...	Tim. 5002.....	½F...	SB....	5.10	Sp....	Sp....		Tim.
Davis.....81	118	31x4	B&B. DX-10...	SP....	2-1	9⅞	6¾	War. T-64A...	Eng...	3	m-Pet...	m-Pet...	Tim. 5002.....	½F...	SB....	5.10	Sp....	Sp....		Tim.
Dodge.....1924	116	32x4	Own.....	MDD.	4-3	9	6¾	Own.....	Eng...	3	m-Own..	None...	Own.....	½F...	SB....	4.54	Sp....	TT....	10¼	Own
Dorris.....6-80	{132 136	32x6	Own.....	MDD.	8-8	8⅛	6	B-L. 30A.....	Eng...	3	m-Spi...	m-Spi...	Tim. 5512.....	½F...	SB....	3.76	Sp....	Sp....	9	Tim.
Dort.....27	115	31x4*	Del JA5001....	MDD.	3-2	7⅞	5⅞	Own.....	Eng...	3	f-The...	f-The...	Fli. 2KA10....	¾F...	SB....	4.66	Sp....	TA....	10½	B-L
Duesenberg.....ST8	134	33x5	Own.....	SP....	2-1	13	7⅜	Own.....	Eng...	3	f-Cli....	None...	Own.....	½F...	SB....	4.90	{RR.. TT..	TT....	11	Own
duPont.....C	124	{32x4 32x4½	B-L. 10.....	MDD.	1-2	9⅞	6⅞	B-L. 30.....	Eng...	3	m-Spi...	m-Spi...	Col. 50000.....	FF...	SB....	4.45	Sp....	Sp....	9	B-L
Durant.....A22	109	31x4	Own.....	SP....	1-	.....	.....	War. Spec.....	SeU...	3	m-Spi...	m-Spi...	Ada. Spec.....	¾F...	SB....	4.33	Sp....	Sp....		Ada.
Eagle.....6	115	30x3½	B&B. Spec.....	SP....	2-1	.....	.....	War. Spec.....	SeU...	3	.....	.....	Ada. Spec.....	½F...	SB....	4.77	Sp....	Sp....		Ada.
Earl.....40	112	32x4	B&B. DX-10...	SP....	2-1	9⅞	6¾	Own.....	Eng...	3	f-Own...	f-Own...	Own.....	½F...	SB....	4.87	Sp....	Sp....		Own
Elcar.....6-60	118	32x4*	B&B. DX-10...	SP....	2-1	9⅞	6¾	War. T64J....	Eng...	3	m-Har..	m-Har..	Sal. A.....	¾F...	SB....	4.70	Sp....	Sp....	9	B-L-C
Elcar.....4-40	112	31x4*	B&B. DX-10...	SP....	2-1	9⅞	6¾	War. T64J....	Eng...	3	m-Mec..	Ncne...	Sal. C.....	½F...	SB....	4.70	Sp....	Sp....	9	B-L-C
Elcar.....6-50	113	31x4	B&B. DX...	SP....	2-1	9⅞	6¾	War. T64J....	Eng...	3	m-Mec..	m-Mec..	Sal. C.....	½F...	SB....	4.70	Sp....	Sp....	9¼	
Elgin.....25	118	32x4½*	B&B. DX-72...	SP....	2-1	9⅞	6¾	War. CHM....	Eng...	3	f-Sne....	f-Sne....	Col. 11015.....	½F...	SB....	4.66	TT....	TA....	10	B-L-C
Essex.....6	110½	31x3¾	Own.....	MDO.	4-3	.....	.....	Own.....	Eng...	3	m-Spi...	m-Spi...	Own.....	¾F...	SB....	5.60	Sp....	Sp....	8½	Own
Flint.....	120	32x4½*	Own.....	SP....	.....	.....	.....	War. Spec.....	SeU...	3	m-Spi...	m-Spi...	Ada. Spec.....	½F...	SB....	4.78	Sp....	Sp....		Ada.
Ford.....T	100	30x3½	Own.....	MDO.	13-12	.....	.....	Own.....	Eng...	2	m-Own..	None...	Own.....	¾F...	SB....	3.63	TT....	Sp....	10¼	Own
Fox.....7F	132	32x4½	B-L. 30A.....	MDD.	4-4	8⅛	6¼	B-L. 30A.....	Eng...	3	m-Spi...	.....	Tim. 5310.....	½F...	SB....	4.90	Sp....	TA....		Tim.
Franklin.....10B	115	32x4½	M&E. 10.....	SP....	2-1	9⅞	6¾	Own.....	Eng...	3	m-Spi...	m-Spi...	Own.....	FF...	SB....	4.72	Sp....	Sp....	9½	Own
Gardner.....5	112	32x4	B&B. DX-138..	SP....	2-1	9⅞	6¾	Mec. MU.....	Eng...	3	m-Pet...	m-Pet...	Fli. 44EA10....	¾F...	SB....	4.80	Sp....	Sp....		Fli.
Gray.....N&O	{103½ 100	30x3½	Own.....	SO....	2-1	9¾	7½	Det. CN.....	Eng...	3	{m-Mec.. f-Sne..	m-Mec.) f-Sne..)	Tim. 0500.....	½F...	SB....	3.90	Sp....	Sp....	10½	NP
H.C.S.....6	126	{32x4½* 33x5*	B-L. 38.....	MDD.	4-4	8 1/16	6¼	B-L. 30A.....	Eng...	3	m-Spi...	None...	Own.....	¾F...	SB....	4.36	TT....	TT....	10	B-L-C
H.C.S.....4	120	32x4½	B-L. 30.....	MDD.	4-4	8⅞	6¼	B-L. 30.....	Eng...	3	m-Spi...	m-Spi...	Own.....	½F...	SB....	4.63	TT....	TT....		Own
Hanson.....66	121	32x4	B&B. DX-10...	SP....	2-1	9⅞	6¾	G-L. 573T....	Eng...	3	m-Uni...	.....	Tim. 5052.....	FF...	SB....	4.66	Sp....	Sp....		Tim.
Hatfield.....6-55	121	32x4	B&B. DX-10...	SP....	2-1	9⅞	6¾	Dur. 04700....	Eng...	3	m-Spi...	m-Spi...	Col. 12000.....	½F...	SB....	4.63	Sp....	Sp....	10½	B-L-C
Haynes.....60	121	32x4½	Own.....	MDD.	3-2	9	6½	Mec. LU.....	Eng...	3	m-Thi...	m-Thi...	Own.....	½F...	SB....	4.41	Sp....	Sp....	8¾	Sta.
Hudson.....6	126	34x4½	Own.....	MDO.	6-6	9⅞	7¾	Own.....	Eng...	3	m-Spi...	m-Spi...	Own.....	½F...	SB....	4.45	Sp....	Sp....		Own
Hupmobile.....R	115	32x4	Lon. 10.....	MDD.	2-2	7¾	5¾	Own.....	Eng...	3	m-Uni...	m-Uni...	Own.....	¾F...	SB....	4.87	Sp....	Sp....	10	B-L-C
Jewett.....	112	31x4*	Lon. 10.....	MDD.	2-2	7¾	5¾	War. T64J....	Eng...	3	m-Mec..	m-Mec..	Tim. Spec.....	½F...	SB....	4.60	Sp....	Sp....	9¼	Tim.
Jordan.....MX	120	{32x4* 32x4½*	Det. N.....	SP....	2-1	9⅞	6⅞	Det. KY.....	Eng...	3	m-Thi...	m-Thi...	Tim. 5200.....	½F...	SB....	4.42	Sp....	Sp....	8¾	Tim.
Jordan.....H&L	124½	32x4½*	Det. N.....	SP....	2-1	9⅞	6⅞	Det. KY.....	Eng...	3	m-Thi...	m-Thi...	Tim. 5200.....	½F...	SB....	4.42	Sp....	Sp....	8¾	Tim.
Kelsey.....G	112	32x4	B&B. DX-1028.	SP....	2-1	9⅞	6¾	W-M. C5.....	Eng...	3	m-Spi...	m-Spi...	Sal. 1492E.....	½F...	SB....	4.70	Sp....	Sp....	10	Sal.
King.....LL	{124 120	32x4½	Det. LA.....	MDO.	2-	.....	.....	Own.....	Eng...	3	f-Uni...	f-Uni...	Col. 50016.....	FF...	SB....	4.88	TT....	TA....		

ABBREVIATIONS:

A&D—Artillery and Disk
Ada—Adams
A&W—Artillery and Wire
Art—Artillery
Aut—Automatic
B&B—Borg & Beck
Bim—Bimel
B-L—Brown-Lipe
B-L-C—Brown-Lipe-Chapin
Blo—Blood
BPS—Bevel, Pinion and Sector
Bud—Budd
Buf—Buffalo
Ca—Cantilever
C&L—Cam and Lever
Cle—Cleveland
Cli—Climax
Co—Cone
Col—Columbia
Del—Detlaff
Det—Detroit
DIM—Direct Mechanical
Dis—Disk
Dist—Disteel
Dit—Ditweiler
Doo—Dooley
Dur—Durston
Eat—Eaton
Eng—Unit with engine
¼ E—Quarter Elliptic
½ E—Half Elliptic
¾ E—Three Quarter Elliptic
Ex-Ds—External Driveshaft
Ex-Fw—External Four Wheels
Ex-Rw—External Rear Wheels
½ F—Semi Floating
¾ F—Three Quarter Floating
FE—Full Elliptic
FF—Full Floating
Fir—Firestone
Fle—Flexite
Fli—Flint
For—Forsythe
Ful—Fuller
f—Fabric
GC—Grease Cups
Gem—Gemmer
G-L—Grant-Lees
Goo—Goodrich
Har—Hartford
Hay—Hayes
Hoo—Hoosier
Hoo—Hoopes
Hou—Houk
Huk—Huck
Hyd—Hydraulic
I&E Fw—Internal and External Four Wheels
Ind—Indestructible
In-Ds—Internal Driveshaft
In-Fw—Internal Four Wheels
In-Rw—Internal Rear Wheels
Jac—Jacox
Jax—Jaxon
Kel—Kelsey
Lav—Lavine
Lon—Long
M&E—Merchants & Evans
Mec—Mechanics
MDD—Multiple Dry Disk

Chassis Specifications

Body Styles and Prices on Page 394

BRAKES					SHACKLES		FRONT AXLE			STEERING GEAR				SPRINGS				FRAME				WHEELS		MAKE & MODEL
Service			Emergency		Front Springs	Rear Springs								Front		Rear								
Type & Location	Braking Area (Sq. Ins.)	Application	Type & Location	Braking Area (Sq. Ins.)	Type	Type	Make	Model	Transverse Inclination of Steering Pivots (Deg.)	Make and Model	Type	No. of Revolutions of Wheel from Locked to Locked Positions of Road Wheels	Outside Diameter of Minimum Turning Circle (ft.)	Type	Length & Width (Ins.)	Type	Length & Width (Ins.)	Material	Make	Chassis Lubrication	Rims Make	Type‡‡	Make‡‡	
Rr-Rw	....	DiM	In-Rw	....	Met	Met	Sal	.....	....	Lav	W&W	.....	.....	½E.	39 x2¼	½E.	57½x2¼	PS.	.....	PG.	.....	Art	.....	American 66
Rr-Rw	148	DiM	Ex-Ds	50	Met	Met	Sal	C	3½	Gem. L	W&S	.....	19½	½E.	37 x2	½E.	58 x2	PS.	Hyd.	PG.	Fir	Art	Bim	Anderson 50
Rr-Rw	168	DiM	Ex-Ds	50	Met	Met	Sal	A	3½	Gem. L	W&S	.....	20	½E.	x2	½E.	58 x2	PS.	Hyd.	PG.	Fir	Art	Bim	Anderson 50
Rr-Rw	175	DiM	In-Rw	136	Met	Met	Col	1100	1½	Lav. 2100	S&N	1¾	39½	½E.	34 x1¾	¾E.	48 x2	PS.	Det.	PG.	Fir	Art	.....	Apperson 6
Rr-Rw	....	DiM	In-Rw	....	Met	Met	Own	.....	2¼	Own	W&W	2¼	38½	½E.	34 x1¾	¾E.	48 x2	PS.	Own	PG.	.....	Art§	.....	Apperson 8
Rr-Rw	188	DiM	Ex-Ds	50	Met	Met	Col	1115	0	Ros. C	C&L	.....	.....	½E.	38 x2	½E.	57 x2¼	PS.	Smi	PG.	Fir	A&D	For	Auburn 6-63
Rr-Rw	132	DiM	Ex-Ds	50	Met	Met	Col	1114	0	Jac	S&N	.....	.....	½E.	36 x2	½E.	57 x2	PS.	Smi	OC.	Fir	A&D	.....	Auburn 6-43
Rr-Fw	175	DiM	In-Rw	138	Met	Met	Col	1100	....	Jac. L1A176	S&N	.....	.....	½E.	38 x2	½E.	56 x2	PS.	Sav	PG.	Fir	Art	Bim	Barley 6-50
Rr-Rw	248	DiM	In-Rw	221	Met	Met	Col	3100	....	Gem. L-3	W&W	1⅞	39	½E.	40 x2½	½E.	58 x2½	PS.	Hyd	PG.	Fir	Art	.....	Bay State 1-2
Rr-Rw	144	DiM	In-Rw	80	Met	Met	Own	.....	4	Own	S&N	1⅞	18½	½E.	38 x2	Ca	53 x2½	PS.	Hyd	{GC OC	Fir	Art	Schw	Brewater 41-91
Rr-Fw	....	DiM	In-Rw	....	Met	Met	Own	.....	....	Jac	S&N	.....	36	½E.	36 x2	½E.	55½x2	PS.	Smi	PG.	Jax	Art§	.....	Buick 4
Rr-Fw	....	DiM	In-Rw	....	Met	Met	Own	.....	....	Jac	W&W	.....	{40 42	½E.	36½x2	Ca	46½x2½	PS.	Smi	PG.	Own	Art§	.....	Buick 6
Rr-Fw	444	DiM	In-Rw	240	Met	Met	Own	.....	5	Own	W&S	2½	44	½E.	42 x2	Pl	54 x2	PS.	.....	PG.	Kel	Art	Kel	Cadillac 63
Rr-Rw	240	DiM	In-Rw	209	Met	Met	Col	3105	2	Jac. L1A100	S&N	2	.....	½E.	39 x2	½E.	54¾x2¼	PS.	Own	PG.	Fir	Art	Mut	Case X
Rr-Rw	240	DiM	In-Rw	209	Met	Met	Col	50002	2	Jac. L2A189	S&N	2	.....	½E.	40 x2	½E.	57 x2½	PS.	Own	PG.	Fir	Art	Mut	Case Y
Rr-Rw	352	DiM	In-Rw	154	Met	Met	Own	.....	....	Gem. M6889	W&W	.....	40	½E.	38 x2	½E.	56 x2¼	PS.	P&B	PG.	Kel	Dis	Kel	Chalmers Y
Rr-Rw	....	DiM	Ex-Ds	....	Met	Met	Own	.....	....	Own	W&W	.....	40	½E.	.....	½E.	.....	PS.	.....	OC.	.....	Art	.....	Chandler 6
Rr-Rw	89	DiM	In-Rw	72	Met	Met	Own	.....	0	Own	W&W	1¾	40	¼E.	26 x1¾	¼E.	28 x2	PS.	Own	PG.	Jax	Art	Hay	Chevrolet Superior
Rr-Fw	....	Hyd	Ex-Ds	....	Met	Met	Own	.....	2	Jac	W&W	.....	19	½E.	35 x1¾	½E.	51½x2	PS.	Smi	PG.	Mot	Art§	Mot	Chrysler 6
Rr-Rw	176	DiM	Ex-Ds	33	Met	Met	Own	.....	0	CAS. I	W&W	1¾	38	½E.	38½x2	½E.	53 x2	PS.	Hyd	PG.	Fir	Art	Bim	Cleveland 42
Rr-Rw	240	DiM	In-Rw	210	Met	Met	Col	5003	2	Gem. M	W&W	.....	45	½E.	39 x2¼	½E.	57 x2¼	PS.	Hyd	OC.	Fir	Art§	Mot	Cole 1924
Rr-Rw	....	DiM	In-Ds	....	Met	Met	Tim	1000	....	Gem. 460	W&W	.....	.....	½E.	.....	½E.	.....	PS.	Par	OC.	.....	A&D	.....	Columbia L-6
Rr-Rw	....	DiM	In-Rw	....	Met	Met	Tim	1150	....	Gem L	W&W	.....	.....	½E.	38 x2	Ca	49 x2½	PS.	Det	OC.	.....	Art	Pru	Columbia B-6
Rr-Rw	....	DiM	In-Rw	....	Met	Met	Per	73F	....	Lav. 2100	S&N	.....	33	½E.	36 x1¾	½E.	53 x2¼	PS.	Hyd	Aut.	.....	A&D	For	Courier
Rr-Rw	....	DiM	In-Rw	....	Met	Met	Tim	1220	....	Lav	W&W	.....	.....	½E.	x2	½E.	x2¼	PS.	Sha	PG.	.....	Dis	Own	Crawford-Dagmar
Rr-Rw	273	DiM	In-Rw	273	Met	Met	Tim	1320	2	Gem. K	W&S	.....	48	½E.	40 x2½	¾E.	62 x2½	PS.	Par	PG.	Fir	Opt	.....	Cunningham V
Rr-Rw	....	DiM	In-Rw	....	Met	Met	Tim	1320	....	Gem. K	W&W	.....	30	½E.	.....	½E.	60 x3	PS.	Par	OC.	.....	Art§	Schw	Daniels 23-38
Rr-Rw	....	DiM	In-Rw	....	Met	Met	Tim	1000	....	CAS. H	W&W	.....	.....	½E.	35 x2	½E.	52 x2	PS.	Smi	OC.	.....	Dis	.....	Davis 71
Rr-Rw	....	DiM	In-Rw	....	Met	Met	Tim	1150	....	CAS. H	W&W	.....	.....	½E.	35 x2	½E.	52 x2	PS.	Smi	OC.	.....	Dis	.....	Davis 81
Rr-Rw	64	DiM	In-Rw	50	Met	Met	Own	.....	7	Own	W&W	2	43	½E.	37 x2	½E.	55 x2	PS.	Own	PG.	Kel	Art	Kel	Dodge 1924
Rr-Rw	....	DiM	In-Rw	....	Met	Met	Tim	320	2½	Ros. E	C&L	.....	36	½E.	38 x2¼	½E.	60 x2¼	PS.	Smi	PG.	Fir	Art	.....	Dorris 6-80
Rr-Rw	62	DiM	In-Rw	63	Met	Met	Fli	2KAA	....	Gem. 60	W&W	7½	40	½E.	37½x2	Ca	50 x2	PS.	P&B	PG.	Jax	Art§	Hay	Dort 27
Fw	260	Hyd	Ex-Ds	34	Met	Met	Own	.....	0	Lav. 2100	S&N	1½	42	½E.	39 x2¼	½E.	59 x2½	PS.	Own	PG.	None	Wir	R-W	Duesenberg ST8
Rr-Rw	119	DiM	In-Rw	108	Met	Met	Col	5000	....	Jac. L2A82	S&N	.....	.....	½E.	39 x2	½E	58 x2½	PS.	P&B	PG.	Fir	Art	PJ	duPont C
Rr-Rw	....	DiM	In-Rw	....	Met	Met	Ada	Spec	....	War	W&W	.....	18	¼E.	34 x2	½E	48 x2	PS.	Smi	PG.	.....	Art	Hay	Durant A22
I&E-Fw	....	DiM	I&E-Fw	....	Met	Met	Ada	Spec	....	War. Spec	W&S	.....	.....	½E.	35 x2	½E.	50½x2	PS.	.....	PG.	.....	Art	.....	Eagle 6
Rr-Rw	....	DiM	Ex-Ds	....	Met	Met	Own	.....	....	CAS. H	W&W	.....	38	½E.	36 x	½E.	56 x	PS.	Par	PG.	.....	Art§	Hay	Earl 40
Rr-Rw	174	DiM	In-Rw	168	Met	Met	Sal	A	0	Gem. L	W&W	1¾	.....	½E.	35¾x2	½E.	52 x2½	PS.	Smi	OC.	Fir	A&D	.....	Elcar 6-60
Rr-Rw	148	DiM	Ex-Ds	49	Met	Met	Sal	C	0	CAS. I	W&W	1¾	.....	½E.	32 x2½	½E.	51 x2¼	PS.	P&B	OC.	Fir	A&D	For	Elcar 4-40
Rr-Rw	148	DiM	Ex-Ds	49	Met	Met	Sal	C	....	Ros. O	C&L	1¼	20	½E.	34 x2	FE.	51 x2¼	PS.	P&B	OC.	Fir	Art	Pru	Elcar 6-50
Rr-Rw	238	DiM	Ex-Ds	49	Met	Met	Col	503	2	Ros. C	C&L	1¾	44	½E.	35¾x2	Tx	47 x2	PS.	Hyd	PG.	Fir	Dis	Buf	Elgin 25
Rr-Rw	136	DiM	In-Rw	105	Met	Met	Own	.....	....	Own	W&W	1¾	38	½E.	36 x2	½E.	54½x2	PS.	Own	OC.	.....	Art	.....	Essex 6
Rr-Rw	....	DiM	In-Rw	....	Met	Met	Ada	Spec	....	War. Spec	W&W	.....	.....	½E.	36 x2	½E.	54 x2	PS.	P&B	PG.	.....	Art	.....	Flint
Rr-Ds	....	DiM	In-Rw	....	Met	Met	Own	.....	5½	Own	Pla	.....	38½	T½	31½x1½	T½	43½x2	PS.	Own	GC	Hay	Art	Own	Ford T
Rr-Rw	....	DiM	In-Rw	....	Met	Met	Tim	1220	....	Ros. XB	S&N	.....	60	½E.	45 x2¼	½E.	60¼x2½	PS.	P&B	PG.	.....	A&W	Schw	Fox 7F
Rr-Ds	83	DiM	Ex-Rw	147	Met	Met	Own	.....	0	Own	W&W	.....	36½	FE.	36 x1¾	FE.	38 x1¾	Wo	Own	PG	Rub	Art§	.....	Franklin 10B
Rr-Rw	136	DiM	Ex-Ds	36	Met	Met	Fli	44DA	....	Dit. TRC300	W&W	.....	36	½E.	35 x1¾	FE.	38 x1¾	PS.	Hyd	PG.	Rub	A&D	Hay	Gardner 5
Rr-Rw	....	DiM	Ex-Ds	....	Met	Met	Tim	0100	....	Own	W&W	⅛	38	¼E.	20 x2	¼E.	30 x2	PS.	Mid	OC.	Kel	A&D	Kel	Gray N&O
Rr-Rw	200	DiM	In-Rw	125	Met	Met	Col	5028	....	Gem. M	W&W	.....	50	½E.	36 x2½	½E.	56 x2½	PS.	Hyd	OC.	.....	Wir	Houk	H.C.S. 6
Rr-Rw	....	DiM	In-Rw	....	Met	Met	Col	5028	....	Gem. M	W&W	.....	.....	½E.	36 x2½	½E.	56 x2½	PS.	Hyd	OC.	.....	W&D	.....	H.C.S. 4
Rr-Rw	....	DiM	In-Rw	....	Met	Met	Tim	5153	....	Gem. 42	S&N	.....	17	½E.	.....	½E.	.....	PS.	Det	PG.	.....	Art	Kel	Hanson 66
Rr-Rw	188	DiM	In-Rw	180	Met	Met	Col	12000	....	Gem. M	W&W	.....	30	½E.	37½x2	½E.	58 x2	PS.	Sav	PG.	Fir	Art	Hoo	Hatfield 6-55
Rr-Rw	210	DiM	Ex-Ds	60	Met	Met	Own	.....	0	Jac. L2A	S&N	1¾	35	½E.	35½x2¼	½E.	54¼x2¼	PS.	P&B	PG.	Fir	Dis	Ind	Haynes 60
Rr-Rw	....	DiM	In-Rw	....	Met	Met	Own	.....	....	Gem	W&W	.....	22½	½E.	39 x2¼	½E.	58 x2¼	PS.	Det	OC.	.....	Art	WW	Hudson 6
Rr-Rw	132	DiM	In-Rw	96	Met	Met	Own	.....	....	Jac	S&N	2	43	½E.	37¼x2	½E.	56½x2	PS.	Smi	PG.	Kel	Art	Kel	Hupmobile R
Rr-Rw	163	DiM	In-Ds	43	Met	Met	Tim	Spec	2	Gem. 60	W&W	1¾	41	½E.	36 x2	½E.	54 x2	PS.	Det	PG.	Jax	Art	Kel	Jewett
Rr-Rw	173	DiM	In-Rw	154	Met	Met	Tim	1160	....	Gem. M	W&W	1¾	.....	½E.	37 x2	½E.	55¾x2	PS.	P&B	PG.	Fir	Art	Mot	Jordan MX
Rr-Rw	173	DiM	In-Rw	154	Met	Met	Tim	1160	....	Gem. M	W&W	1¾	.....	½E.	37 x2	½E.	55¾x2	PS.	P&B	PG.	Fir	Art	Mot	Jordan H&L
Rr-Rw	145	DiM	Ex-Ds	46	Met	Met	Sal	1491E	2½	Lav. 2700	S&N	1¾	35	½E.	38½x2	½E.	52¾x2	PS.	Hyd	PG.	Fir	Art	.....	Kelsey G
Rr-Rw	....	DiM	In-Rw	....	Met	Met	Col	5000	....	Jac. L-3A-86	S&N	.....	44	½E.	40 x2	Ca	54 x2½	PS.	P&B	PG.	.....	W&D	Hay	King LL

DO—Multiple Disk in Oil
et—Metal
—Metal
ie—Michelin
id—Midland
ot—Motor Wheel Corp.
un—Muncie
ut—Mutual
P—New Process
or—Northway
C—Oil Cups
pt—Optional
&B—Parish & Bingham
ar—Parrish

Pen—Penfield
Per—Peru
Pet—Peters
PG—Pressure Gun
Pla—Planetary
Pl—Platform
Pru—Prudden
PS—Pressed Steel
RAx—Rear Axle
Roc—Rockford
Ros—Ross
RR—Radius Rods
Rub—Rubsam
RuS—Rubber Shock Absorbers
Sal—Salisbury
Sav—Savage
SB—Spiral Bevel
SC—Special Cantilever
Schw—Schwartz
SeU—Separate Unit
Sha—Sharon
S&N—Screw and Nut
Smi—Smith
Sne—Snead
SO—Single Plate in Oil
Sp—Springs
SP—Single Plate
Spec—Special
Spi—Spicer
Sta—Standard
StM—St. Marys
T½—Transverse half elliptic
TA—Torque Arm
TB—Straight Bevel
Tx—Double Transverse ½ Elliptic
The—Thermoid
Thi—Thiemer
Tim—Timken
TT—Torque Tube
Tua—Tuarc
Uni—Universal
UwT—Unit with Torque Tube
Wo—Wood
W&D—Wire and Disk
War—Warner
W-M—Willys-Morrow
W&S—Worm and Sector
W&W—Worm and Wheel
Wir—Wire
*—Balloon Tires optional at extra cost
†—Four-Wheel Brakes optional at extra cost
‡—Width of Facing
‡‡—Standard Phaeton Models
§—Optional

American Passenger Car Chassis

For Complete Engine Specifications, see Pages 400-403

MAKE & MODEL	Wheelbase‡‡	Tire Size‡‡	CLUTCH: Make and Model	Type	Number of Driving and Driven Disks	Facing Sizes: Maximum (Ins.)	Facing Sizes: Minimum (Ins.)	GEARSET: Make and Model	Location	Number of Forward Speeds	UNIVERSALS: Front Type & Make	UNIVERSALS: Rear Type & Make	REAR AXLE: Make and Model	Type	Final Drive	Gear Ratio‡‡	Propulsion Taken By	Torque Taken By	Read Clearance (Ins.) With Standard Tire Size	Differential Make
Kissel.....55	121	32x4*	B&B. DX-1029.	SP....	2-1	9⅞	6¾	War. T64J.....	Eng...	3	m-Spi...	m-Spi...	Tim. 5140.....	¾F...	SB....	4.42	Sp....	Sp....	9	Tim.
LaFayette.....132	132	33x5*	Own.....	MDD.	9-8	7¾	5¾	Own.....	Eng...	3	m-Own..	None...	Sta.....	FF...	SB....	4.58	TT..	TT..	10	Own.
Lexington.....Concord	119	32x4*	Lon. 10.....	MDD.	2-2	7¾	5¾	War. T60.....	Eng...	3	f-Sne...	f-Sne...	Sal.....	½F...	SB....	5.10	Sp....	Sp.....		B-L-C
Lexington.....M.M	123	32x4½*	Lon. SP.....	MDD.	2-2	7¾	5¾	War. T60.....	Eng...	3	f-Sne...	f-Sne...	Sal.....	½F...	SB....	5.10	Sp....	Sp.....		B-L-C
Liberty.....10D	117	32x4	B&B. DX-10...	SP....	2-1	9⅞	6¾	Det. DY.....	Eng...	3	m-Spi...	m-Spi...	Tim.....	½F...	SB....	4.80	Sp....	Sp.....		Tim.
Lincoln.....	136	33x5*	Own.....	MDD.	7-8	8¾	6¾	Own.....	Eng...	3	m-Spi...	None...	Tim. Spe.....	FF....	SB....	4.58	TT..	TT..		Tim.
Locomobile.....8	142	35x5	Own.....	MDD.	6-7	11⅝	8⅝	Own.....	SeU...	4	m-Own..	m-Own..	Own.....	FF...	SB....	3.50	RR..	TA..	9¾	Own.
McFarlan.....SV	127	32x4½	Lon. 10.....	MDD.	2-2	.....	.....	War. T64J.....	Eng...	3	.....	.....	Uni. 400FH....	¾F...	SB....	5.10	Sp....	TA..	10½	Sal.
McFarlan.....TV	140	33x5	M&E 12F.....	MDD.	.....	11½	.....	B-L 35.....	SeU...	3	f-Sne...	m-Pet...	Tim. 5712....	FF....	SB....	3.50	Sp....	TA..	10½	Tim.
Marmon.....34	136	32x4½* 33x5*	Own.....	MDD.	9-8	7¾	5¾	Own.....	UwT..	3	m-Spi...	None...	Own.....	¾F...	SB....	4.10	TT..	TA..	9	B-L-C
Maxwell.....25	109	31x4	Mec. 9.....	SP....	1-2	.....	.....	Own.....	Eng...	3	m-Own..	f-Own...	Own.....	½F...	SB....	4.60	Sp....	Sp.....		Own
Moon.....6-40	115	31x4*	B&B. DX-10...	SP....	2-1	9⅞	6¾	War. T64J.....	Eng...	3	m-Spi...	m-Spi...	Tim. 5010....	½F...	SB....	5.10	Sp....	Sp.....	10	Tim.
Moon.....6-58	128	32x4½*	B&B. DX-10...	SP....	2-1	9⅞	6¾	B-L. 20.....	Eng...	3	m-Spi...	m-Spi...	Tim. 5142....	½F...	SB....	5 09	Sp....	Sp.....	10	Tim.
Moon.....Six	113	31x4*	B&B. D-10...	SP....	2-1	9⅞	6¾	War. T64J.....	Eng...	3	m-Spi...	m-Spi...	Tim. 5010....	½F...	SB....	5 10	Sp....	Sp.....	10	Tim.
Nash.....6	121 127	33x4 34x4½	B&B. DX-10...	SP....	2-1	9⅞	6¾	Own.....	Eng...	3	m-Own..	m-Own..	Own.....	½F...	SB....	4.50	Sp....	Sp.....	9	Own
Nash.....4	112	33x4	B&B. DX-10...	SP....	2-1	9⅞	6¾	Own.....	Eng...	3	m-Own..	m-Own..	Own.....	½F...	SB....	5.50	Sp....	Sp.....	10½	Own
National.....BB	130	32x4½	B&B. GX12...	SP....	2-1	11⅞	8¼	B-L. 30.....	Eng...	3	m-Uni...	None...	Col. 50000....	FF...	SB....	4.08	Sp....	TA..	9¼	B-L-C
Noma.....C4	128	33x5	B&B. DX-10...	SP....	2-1	9⅞	6¾	Det.....	Eng...	3	m-Spi...	m-Spi...	Tim.....	½F...	SB....	4.45	Sp....	Sp.....	10	Tim.
Oakland.....6-54	113	31x4	Hoo. 9.....	SP....	2-1	9	5½	Mun. 6-54.....	Eng...	3	m-Mec..	m-Mec..	Own.....	½F...	SB....	4.70	Sp....	Sp.....	10	B-L-C
Oldsmobile.....30	110	31x4	B&B. DX-1042.	SP....	2-1	9⅞	6¾	Mun. 551.....	Eng...	3	f-Own...	f-Own...	Own.....	½F...	SB....	5.10	Sp....	Sp.....	10¼	B-L
Overland.....91-92	100 106	30x3½	B&B. 8.....	SO....	2-1	.....	.....	Own.....	Eng...	3	m-Own..	None...	Own.....	½F...	SB....	4.50	Sp.. TA.. TT..	TA.. Sp..		Own
Packard.....S-6	126 133	33x4½	Own.....	MDD.	5-4	8	6	Own.....	Eng...	3	m-Spi...	m-Spi...	Own.....	½F...	SB....	4.66	Sp....	TA..	10	Own
Packard.....S-8	136 143	33x5	Own.....	MDD.	5-4	8	6	Own.....	Eng...	3	m-Spi...	m-Spi...	Own.....	½F...	SB....	4.70	Sp....	TA..	10	Own
Paige.....6-70	131	33x4½*	Lon. 12.....	MDD.	2-1	9¾	7¾	War.....	Eng...	3	m-Mec..	m-Mec..	Tim. Spec.....	½F...	SB....	4.60	Sp....	Sp....	8¾	Tim.
Peerless.....6	126½	32x4½	Own.....	MDD.	.....	.....	.....	Own.....	Eng...	3	m-Spi...	m-Spi...	Tim. Spec.....	½F...	SB....	4.63	.....	TA..	10	Tim.
Peerless.....66	128	33x5*	Own.....	MDD.	5-5	8⅛	6¼	Own.....	Eng...	3	None...	m-Spi...	Tim. 5320....	¾F...	SB....	4.90	TT..	TA..	10½	Tim.
Pierce-Arrow.....33	138	33x5	Own.....	MDD.	.....	.....	.....	Own.....	SeU...	3	f-Goo...	m-Spi...	Own.....	½F...	SB....	4.29	Sp....	TA..	10½	Own.
Pilot.....6-56	126	32x4½	Hoo. K.....	MDD.	2-2	8⅞	5½	Mun.....	Eng...	3	m-Blo...	.....	Col.....	¾F...	SB....	4.67	Sp....	Sp.....		B-L-C
Premier.....6-D	126¾	32x4½* 33x5‡	B&B. DAX-10.	SP....	2-1	9⅞	6¾	Own.....	Eng...	3	m-Spi...	m-Spi...	Tim. 5512.....	½F...	SB....	4.58	Sp....	Sp.....	9	Tim.
Premocar.....6-40	117	32x4	B&B. DX-10...	SP....	2-1	9⅞	6¾	Det. LY.....	Eng...	3	m-Spi...	m-Spi...	Tim.....	½F...	SB....	5.01	Sp....	Sp.....		Tim.
R & V Knight.....H	124	32x4½	B-L. 10.....	SP....	1-2	9⅞	6⅞	B-L. 30.....	Eng...	3	None...	m-Spi...	Tim. 5302.....	½F...	SB....	5.40	Sp....	Sp.....	11	B-L-C
Reo.....T6	120	32x4* 33x4½‡	Own.....	MDD.	6-7	6⅝	5⅛	Own.....	SeU...	3	f-Own...	f-Own...	Own.....	½F...	SB....	4.70	Sp....	TA..	9	Own
Revere.....M	131	32x4½	B-L. 35.....	MDD.	5-5	8⅞	6¼	B-L. 354.....	Eng...	4	m-Spi...	m-Spi...	Sta. 3070.....	½F...	SB....	3.44	TT..	TT..	10	Sta.
Rickenbacker.....C	117	32x4*	Own.....	SP....	2-1	9⅛	7⅛	Own.....	Eng...	3	m-Mec..	m-Mec..	Own.....	¾F...	SB....	4.60	Sp....	Sp.....	9¾	B-L
Roamer.....4-75E	128	32x4½	B-L. 35.....	MDD.	5-5	8⅞	6¼	B-L. 409X.....	Eng...	4	f-M&E..	f-M&E..	Tim. 5310....	¾F...	SB....	4.63	Sp....	Sp.....		Tim.
Roamer.....6-54E	118	32x4½	B&B. DX-10...	SP....	2-1	9⅞	6¾	Ful. TU5.....	Eng...	3	f-M&E..	f-M&E..	Tim. 5310....	¾F...	SB....	4.45	Sp....	Sp.....		Tim.
Rollin.....4	112	31x5.2	B&B. 9.....	SP....	2-1	8⅞	6⅝	Mun. T5.....	Eng...	3	f-Sne...	None...	Sal. Spec.....	½F...	SB....	5.10	{RR.. TT..	TT..	9½	NP.
Rolls-Royce.....40-50	143½	33x5	Own.....	Co....	1-1	14½‡	3¼‡	Own.....	SeU...	4	m-Own..	m-Own..	Own.....	FF...	SB....	3.72	TT..	TT..	10	Own
Sayers.....GL	136	33x5	B&B. GX-12...	SP....	2-1	11⅞	8¼	B-L. 30A.....	Eng...	3	m-Cle...	m-Cle...	Tim. 5712....	FF...	SB....	4.91	Sp....	TA..	10	Tim.
Seneca.....50-51C	112	31x4	B&B. DX-10...	SP....	2-1	9⅞	6¾	G-L. H20.....	Eng...	3	m-Uni...	m-Uni...	Pen. 3595.....	FF...	SB....	4.55	Sp....	Sp.....	10	B-L-C
Star.....	102	30x3½	Own.....	SP....	1-	.....	.....	War. Spec.....	SeU...	3	m-Spi...	m-Spi...	Tim. Spec.....	¾F...	SB....	4.87	Sp....	Sp.....		Own
Stearns Knight.....4	119	33x4½	Own.....	MDD.	7-	.....	.....	Own.....	Eng...	3	f-Cli....	f-Cli....	Own.....	½F...	SB....	4.50	Sp....	TA..		Own
Stearns Knight.....6	130	33x5	Own.....	MDD.	7-	.....	.....	Own.....	Eng...	3	f-Cli....	f-Cli....	Own.....	½F...	SB....	4.70	Sp....	TA..		Own
Stephens.....20-104	124 117	33x4½ 32x4	B&B. DX-10...	SP....	2-1	9⅞	6¾	Mec. LU.....	Eng...	3	m-Mec..	m-Mec..	Tim. {5310... 5140...	½F...	SB....	{5.30 5.10	Sp....	Sp.....	10	Tim.
Sterling Knight.....B6	125	32x4½	Ful. F2.....	MDD.	5-4	8	6	Ful. F2.....	Eng...	3	f-Cli....	f-Cli....	Tim. 5200....	½F...	SB....	4.66	Sp....	Sp.....	9	Tim.
Studebaker.....L-6	112	31x4	Own.....	SP....	1-1	9	7½	Own.....	SeU...	3	f-The...	f-The...	Own.....	½F...	SB....	5.00	Sp....	Sp.....	9¼	Own
Studebaker.....S-6	119	32x4	Own.....	SP....	1-1	12	8⅝	Own.....	SeU...	3	m-Spi...	m-Spi...	Own.....	½F...	SB....	4.33	Sp....	Sp.....	9½	Own
Studebaker.....B-6	126	33x4½	Own.....	SP....	1-1	12	8⅝	Own.....	SeU...	3	m-Spi...	m-Spi...	Own.....	½F...	SB....	3.71	Sp....	Sp.....	9¼	Own
Stutz.....695	130	32x4½* 33x5*	B&B. Spec.....	SP....	2-1	10	9⅞	War. Spec.....	Eng...	3	m-Mec..	m-Mec..	Tim. Spec.....	½F...	SB....	4.55	Sp....	TA..	9½	Tim.
Stutz.....KLDH	130	32x4½ 33x5	War. K19A....	MDD.	13-1	8⅛	8⅛	Own.....	RAx..	3	m-Har...	None...	Tim. Spec.....	¾F...	SB....	3.75	TT..	TT..	9½	Tim.
Stutz.....690	120	32x4	B&B. DX-10...	SP....	2-1	9⅞	6¾	War.....	SeU...	3	m-Mec..	m-Mec..	Tim. Spec.....	½F...	SB....	4.66	Sp....	Sp.....		Tim.
Templar.....6	122	32x4 33x4½	M&E. 10.....	SP....	2-1	9⅞	6¾	War.....	Eng...	3	f-Cli....	f-Cli....	Sal.....	¾F...	SB....	5.10	Sp....	Sp.....		B-L-C
Velie.....56858	118	32x4* 33x4½*	Doo. B.....	SP....	1-2	9⅞	6¾	Dur. 04700....	Eng...	3	m-Thi...	m-Thi...	Col. 11000.....	½F...	SB....	4.70	Sp....	Sp.....	11	B-L-C
Washington.....C	119	32x4	B&B. DX-10...	SP....	2-1	9⅞	6¾	War. T60.....	Eng...	3	m-Blo...	m-Blo...	Col. 3000.....	½F...	SB....	.....	Sp....	TA..	10	B-L-C
Westcott.....D48	125	32x4½	B&B. DX-10...	SP....	2-1	9⅞	6¾	B-L. 30.....	Eng...	3	m-Pet...	m-Pet...	Tim. 5302.....	½F...	SB....	4.45	Sp....	Sp.....	9½	B-L-C
Westcott.....C44	120	32x4½*	B&B. DX-10...	SP....	2-1	9⅞	6¾	War. T64J.....	Eng...	3	m-Pet...	m-Pet...	Col. 33001.....	½F...	SB....	4.90	Sp....	Sp.....	9½	Own
Wills Ste. Claire A&B68	121 127	32x6	Own.....	MDD.	7-1	12	8½	Own.....	Eng...	3	m-Mec..	m-Mec..	Eat. Spec.....	½F...	SB....	4.44	Sp....	TA..	9¾	Own
Willys Knight.....64-67	124 118	32x4½ 32x4	Own.....	MDD.	.....	.....	.....	Own.....	Eng...	3	f-Own...	f-Own...	Own.....	¾F...	SB....	{4.44 5.12	Sp....	Sp.....		Own
Winton.....40	132	33x5	B-L. 30.....	MDD.	6-7	8⅞	6¼	B-L .30A.....	Eng...	3	m-Uni...	m-Uni...	Eat. 420R.....	½F...	SB....	4.58	Sp....	TA..	9½	B-L

ABBREVIATIONS:

A&D—Artillery and Disk
Ada—Adams
A&W—Artillery and Wire
Art—Artillery
Aut—Automatic
B&B—Borg & Beck
Bim—Bimel
B-L—Brown-Lipe
B-L-C—Brown-Lipe-Chapin
Blo—Blood
BPS—Bevel, Pinion and Sector
Bud—Budd
Buf—Buffalo
Ca—Cantilever
C&L—Cam and Lever
Cle—Cleveland
Cli—Climax
Co—Cone
Col—Columbia
Del—Detlaff
Det—Detroit
DIM—Direct Mechanical
Dis—Disk
Dist—Disteel
Dit—Ditweiler
Doo—Dooley
Dur—Durston
Eat—Eaton
Eng—Unit with engine
¼E—Quarter Elliptic
½E—Half Elliptic
¾E—Three Quarter Elliptic
Ex-Ds—External Driveshaft
Ex-Fw—External Four Wheels
Ex-Rw—External Rear Wheels
½F—Semi Floating
¾F—Three Quarter Floating
FE—Full Elliptic
FF—Full Floating
Fir—Firestone
Fle—Flexite
Fli—Flint
For—Forsythe
Ful—Fuller
f—Fabric
GC—Grease Cups
Gem—Gemmer
G-L—Grant-Lees
Goo—Goodrich
Har—Hartford
Hay—Hayes
Hoo—Hoosier
Hoo—Hoopes
Hou—Houk
Huk—Huck
Hyd—Hydraulic
I&E—Internal and External Four Wheels
Fw—Internal Four Wheels
Ind—Indestructible
In-Ds—Internal Driveshaft
In-Fw—Internal Four Wheels
In-Rw—Internal Rear Wheels
Jac—Jacox
Jax—Jaxon
Kel—Kelsey
Lav—Lavine
Lon—Long
M&E—Merchants & Evans
Mec—Mechanics
MDD—Multiple Dry Disk

Specifications—Continued

Body Styles and Prices on Page 394

Road Clearance (Ins.) With Standard Tire Size	Differential Make	BRAKES: Service Type & Location	BRAKES: Service Braking Area (Sq. Ins.)	BRAKES: Service Application	BRAKES: Emergency Type & Location	BRAKES: Emergency Braking Area (Sq. Ins.)	SHACKLES: Front Springs Type	SHACKLES: Rear Springs Type	FRONT AXLE: Make	FRONT AXLE: Model	FRONT AXLE: Transverse Inclination of Steering Pivots (Deg.)	STEERING GEAR: Make and Model	STEERING GEAR: Type	STEERING GEAR: No. of Revolutions of Wheel from Locked to Locked Positions of Road Wheels	STEERING GEAR: Outside Diameter of Minimum Turning Circle (ft.)	SPRINGS: Front Type	SPRINGS: Front Length & Width (Ins.)	SPRINGS: Rear Type	SPRINGS: Rear Length & Width (Ins.)	FRAME: Material	FRAME: Make	Chassis Lubrication	Rims Make	WHEELS: Type‡‡	WHEELS: Make‡‡	MAKE & MODEL	
9	Tim.	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Tim.	1156	....	Jac. L-2A	S&N	2½	45	½E.	38 x2	½E.	56 x1¾	PS.	Smi.	OC.	.....	Art.	Bim.	Kissel	55
10	Own.	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Own.	.....	....	Own	W&S	.....	45	½E.	42 x2¼	½E.	60 x2½	PS.	Par.	PG.	Fir.	Art.	Bim.	LaFayette	132
.....	B-L-C	Ex-Rw.	....	DiM.	Ex-DS.	....	Met.	Met.	Sal.	.....	....	Ros.	C&L	.....	40	½E.	38 x2	½E.	56 x2	PS.	.....	PG.	Kel.	Art.	Kel.	Lexington	Concord
.....	Tim.	Ex-Rw.	....	DiM.	Ex-DS.	....	Met.	Met.	Sal.	.....	....	Ros.	C&L	.....	42	½E.	38 x2	½E.	50 x2¼	PS.	.....	PG.	Kel.	Art.	Kel.	Lexington	M.M
.....	Tim.	Ex-Rw.	....	DiM.	Ex-DS.	....	Met.	Met.	Tim.	.....	....	Gem.	W&W	.....	.....	½E.	38 x1¾	½E.	51 x2	PS.	Par.	OC.	.....	Art.	Mot.	Liberty	10D
9¾	Own.	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Tim.	Spec.	1½	Own	W&S	.....	42	½E.	39 x2¼	½E.	59½x2½	PS.	Own.	PG.	Kel.	Art.	Kel.	Lincoln	
10½	Sal.	Ex-Rw.	.314	DiM.	In-Rw.	144	Met.	Met.	Own.	.....	....	Own	W&W	.....	.....	½E	40 x2	¾E	50 x2¼	PS.	.....	PG.	Fir.	Art.	.....	Locomobile	8
10½	Tim.	Ex-Rw.	....	DiM.	Ex-DS.	176	Met.	Met.	Sal.	.....	....	Ros.	C&L	.....	43	½E.	39 x2	½E.	59 x2¼	PS.	.....	OC.	Fir.	Art.	.....	McFarlan	SV
9	B-L-C	Ex-Rw.	126	DiM.	In-Rw.	126	Met.	Met.	Tim.	1320	0	Ros. E	C&L	.....	.....	½E.	40 x2¼	½E.	64 x2¼	PS.	Hyd.	OC.	Fir.	Opt.	Opt.	McFarlan	TV
.....	.....	In-Rw.	143	DiM.	In-Rw.	216	Met.	Met.	Own.	.....	2	Own	S&N	1¾	46	½E.	39 x2	TX.	45 x2½	PS	Own.	PG.	Fir.	Art‡	Schw.	Marmon	34
.....	Own.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
10	Tim.	Ex-Rw.	108	DiM.	Ex-DS.	100	Met.	Met.	Own.	.....	0	Own	W&W	7½	.....	½E.	36 x2	½E.	56 x2	PS.	Buf.	PG.	Buf.	Dis.	Own.	Maxwell	25
10	Tim.	Ex-Rw.	161	DiM.	Ex-DS.	48	Met.	Met.	Tim.	1012	....	Gem. 60	W&W	.....	.....	½E.	36 x2	½E.	54 x2	PS.	Det.	OC.	Fir.	A&D.	Mut.	Moon	6-40
10	Tim.	Ex-Rw.	177	DiM.	In-Rw.	154	Met.	Met.	Tim.	1159	....	Gem. L	W&W	.....	.....	½E.	39 x2	½E.	55 x2	PS.	Smi.	OC.	Fir.	A&D.	Mut.	Moon	6-58
.....	.....	Ex-Rw.	161	DiM.	Ex-DS.	48	Met.	Met.	Tim.	1012	....	Gem. 60	W&W	.....	.....	½E.	36	½E.	54 x2	PS.	Det.	OC.	Fir.	A&D.	Mut.	Moon	Six
9	Own.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
10½	Own.	In-Rw.	244	DiM.	Ex-DS.	57	Met.	Met.	Own.	.....	2½	Gem. L	W&W	2¼	45	½E.	39½x2	½E.	56½x2¼	PS.	Smi.	OC.	Hay.	A&D.	Hay.	Nash	6
9¼	B-L-C	Ex-Rw.	162	DiM.	Ex-DS.	46	Met.	Met.	Own.	.....	2½	Gem. 60-1883	W&W	2¼	36	½E.	37 x2	½E.	53¾x2	PS.	Smi.	PG.	Fir.	Art.	Mot.	Nash	4
10	Tim.	Ex-Rw.	240	DiM.	In-Rw.	210	Met.	Met.	Col.	5000	2	War. S-130	W&W	2	40	½E.	38 x2	½E.	60¼x2½	PS.	P&B.	PG.	Fir.	Art.	Schw.	National	BB
.....	.....	In-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Tim.	.....	....	Lav	W&W	.....	.....	½E.	35 x	½E.	58 x	PS.	Own.	PG.	.....	Wir.	Houk.	Noma	C4
10	B-L-C	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
10¼	B-L	Ex-Fw.	260	DiM.	Ex-DS.	35	Met.	Met.	Own.	.....	7½	Jac. L-5A-10	S&N	1	39	½E.	36x2	½E.	51 x2	PS.	Smi.	PG.	.....	Dis.	Dist.	Oakland	6-54
.....	Own.	In-Rw.	116	DiM.	Ex-DS.	40	Met.	Met.	Own.	.....	....	Mun. 551400	W&W	.....	36	½E.	35½x2	½F.	50¾x2	PS	Smi	PG.	Jax.	Art.	Mot.	Oldsmobile	30
.....	.....	In-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Own.	.....	....	Own	Pla	.....	36	SC.	15 x	SC.	15 x	PS.	Own.	OC.	.....	Art.	Hay.	Overland	91-92
10	Own.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
10	Own.	Ex-Fw.	165	DiM.	In-Rw.	137	Met.	Met.	Own.	.....	2	Own	S&N	1⅝	{42 44	½E.	38 x2	½E.	54 x2¼	PS.	Mid.	PG.	Fir.	Art.	Mot.	Packard	S-6
8¾	Tim.	Ex-Fw.	260	DiM.	In-Rw.	130	Met.	Met.	Own.	.....	1	Own	S&N	2¼	{44½ 48	½E.	38 x2	½E.	54 x2¼	PS.	Mid.	PG.	Dist.	Dis.	Mot.	Packard	S-8
10	Tim.	Ex-Rw.	265	DiM.	In-Rw.	200	Met.	Met.	Tim.	1216C	2	Gem. 80	W&W	1¾	44	½E.	40 x2	½E.	61¾x2½	PS.	Par.	PG.	Jax.	Art.	Mot.	Paige	6-70
10½	Tim.	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Tim.	.....	....	Gem. Spec.	W&W	.....	.....	½E.	37 x2	½E.	54 x2¼	PS.	.....	PG.	Kel.	Art.	Kel.	Peerless	6
10½	Own.	Ex-Rw.	220	DiM.	In-Rw.	213	Met.	Met.	Tim.	1220	....	Gem. M	W&W	.....	40	½E.	41 x2¼	½E.	60 x2¼	PS.	.....	PG.	Kel.	Art.	Kel.	Peerless	66
.....	B-L-C	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Own.	.....	....	Own	S&N	.....	44½	½E.	.....	½E.	.....	PG.	Par.	PG.	Fir.	Art.	.....	Pierce-Arrow	33
9	Tim.	Ex-Rw.	....	DiM.	Ex-DS.	....	Met.	Met.	Col.	.....	....	Ros.	W&W	.....	.....	½E.	40 x2	½E.	59 x2½	PS.	.....	OC.	.....	Art.	.....	Pilot	6-56
.....	Tim.	Ex-Rw.	252	DiM.	In-Rw.	231	Met.	Met.	Tim.	1320	7	Own	W&W	2	43	½E.	39 x2¼	½E	57½x2¼	PS.	P&B.	PG.	Fir.	A&D.	Bim.	Premier	6-D
.....	.....	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Tim.	.....	....	Dit	W&W	.....	.....	½E.	36 x	½E.	56 x	PS.	Sav.	PG.	.....	Art.	.....	Premocar	6-40
11	B-L-C	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
9	Own.	Ex-Rw.	220	DiM.	In-Rw.	210	Met.	Met.	Tim.	1220	1½	Jac. L2A70	S&N	3	.....	½E.	42 x2	½E.	61 x2¼	PS.	P&B.	OC.	Fir.	Art.	Mut.	R & V Knight	H
.....	.....	Ex-Rw.	226	DiM.	In-Rw.	202	Met.	Met.	Own.	.....	1½	Own	BPS	1¾	42	½E.	38 x2	½E.	{54½x2 55¼x2	PS.	Own.	PG.	Fir.	A&D.	Mot.	Reo	T6
10	Sta.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
9⅛	B-L	Ex-Rw.	216	DiM.	In-Rw.	180	Met.	Met.	Sta.	3780	0	Gem. M	W&W	.....	.....	½E.	38 x2¼	½E.	58 x2½	PS.	Smi.	PG.	Hoop.	Wir.	Houk.	Revere	M
.....	Tim.	Ex-Fw.	222	DiM.	Ex-DS.	49	Met.	Met.	Own.	.....	3¼	Gem. M	W&W	.....	42	½E.	36 x2	½E.	57 x2½	PS.	Mid.	PG.	Jax.	Dis.	Tua.	Rickenbacker	C
.....	Tim.	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Tim.	1220	....	Jac. 1-2AB	S&N	.....	.....	½E.	39 x2	Ca.	55¾x2	PS.	P&B.	PG.	Fir.	None.	Hay.	Roamer	4-75E
9½	NP.	Ex-Rw.	243	DiM.	In-Rw.	184	Met.	Met.	Tim.	1220	....	Jac. 1-2AB	S&N	.....	.....	½E.	39 x2	Ca.	55¾x2	PS.	P&B.	PG.	Fir.	Wir.	Hay.	Roamer	6-54E
.....	.....	Ex-Fw.	154	DiM.	In-Fw.	154	Met.	Met.	Sal.	Spec.	....	Dit. F	W&W	.....	.....	½E	34 x1¾	½E	46½x2¼	PS	P&B.	PG.	Fir.	Dis.	Tua.	Rollin	4
10	Own.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
10	Tim.	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Own.	.....	5½	Own	S&N	1⅝	55	½E.	42 x2	Ca.	54½x2½	PS.	Own.	PG.	Spec.	Wir.	Spec.	Rolls-Royce	40-50
10	B-L-C	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Tim.	1319	....	Ros. E	C&L	.....	48	½E.	38 x2	½E.	56 x2½	PS.	Hyd.	PG.	Fir.	Art.	StM.	Sayers	GL
.....	Own.	Ex-Rw.	....	DiM.	Ex-Rw.	....	Met.	Met.	Pen.	3435	....	Dit	W&S	.....	34	½E.	36 x2	½E.	52 x2	PS.	P&B.	PG.	Jax.	Art.	.....	Seneca	50-51C
.....	Own.	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Tim.	Spec.	....	War. Spec	W&W	.....	.....	½E.	33½x	½E.	49 x	PS.	.....	OC.	.....	Art.	Hay.	Star	
.....	Own.	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Own.	.....	....	Own	W&W	.....	.....	FE.	40 x2½	Ca.	50 x2½	PS.	Hyd.	OC.	.....	Art.	Mut.	Stearns Knight	4
10	Tim.	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Own.	.....	....	Own	W&W	.....	.....	½E	45 x2½	Ca.	50 x2½	PS.	Hyd.	OC.	.....	Art.	Mut.	Stearns Knight	6
.....	.....	Ex-Rw.	....	DiM.	Ex-DS.	....	Met.	Met.	Tim.	{1216 1161	0	Gem. M	W&W	.....	{42 38	½E.	37½x2	½E.	{57½x2½ 56 x2	PS.	Hyd.	PG.	Sta.	Art.	Mut.	Stephens	20-104
9	Tim.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
9¼	Own.	Ex-Rw.	190	DiM.	In-Rw.	150	RuS.	RuS.	Tim.	1160	2½	Ros.	C&L	1⅝	40	½E.	38½x2	½E.	58 x2	PS.	P&B.	PG.	Hay.	Art.	Budd.	Sterling Knight	B6
9½	Own.	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Own.	.....	....	Own	W&S	1½	.....	½E.	36½x2	½E.	50 x2	PS.	Own.	OC.	Kel.	Art.	Kel.	Studebaker	L-6
9¾	Own.	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Own.	.....	....	Own	W&S	1½	.....	½E.	38 x2	½E.	56 x2	PS.	Smi.	PG.	Kel.	Art.	Kel.	Studebaker	S-6
9½	Tim.	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Own.	.....	2	Own	W&S	1½	.....	½E.	38 x2	½E.	56 x2	PS.	Smi.	PG.	Kel.	Dis.	Mic.	Studebaker	B-6
.....	.....	Ex-Rw.	181	DiM.	In-Rw.	220	Met.	Met.	Tim.	Spec.	6	Gem. Spec.	W&S	1¾	40	½E.	37¼x2	½E.	61½x2¼	PS.	Smi.	PG.	Goo.	W&D.	Wire.	Stutz	695
9½	Tim.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	Tim.	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Sta.	.....	....	Gem. K	W&W	.....	.....	½E	.....	½E.	60 x	PS.	Smi.	OC.	Huk.	Wir.	Houk.	Stutz	KLDH
.....	B-L-C	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Tim.	Spec.	....	Gem	W&W	.....	.....	½E.	38 x	½E.	62 x	PS.	.....	PG.	Opt.	Art.	Opt.	Stutz	690
.....	.....	Ex-Fw.	307	DiM.	Ex-DS.	....	Met.	Met.	Sal.	.....	9	.....	W&W	.....	.....	½E.	36 x	½E.	54 x	PS.	.....	PG.	.....	Art.	.....	Templar	6
11	B-L-C	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
.....	.....	Ex-Rw	137	DiM.	In-Rw.	176	Met.	Met.	Col.	1000	....	Gem. L	W&W	.....	70	½E.	35 x1¾	½E.	55 x2	PS.	Hyd.	PG.	Fir.	A&D.	Mut.	Velie	56858
10	B-L-C	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
9½	Tim.	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Col.	3000	7	Ros. XA	S&N	.....	.....	½E.	38 x2	.....	53 x3	PS.	Smi.	PG.	.....	Art.	.....	Washington	C
9½	B-L-C	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Tim.	1220	1½	Gem. L	W&W	.....	38	½E.	36 x2	½E.	59 x2½	PS.	Hyd.	PG.	Fir.	A&D.	Mot.	Westcott	D48
9¾	Own.	Ex-Rw.	....	DiM.	Ex-DS.	....	Met.	Met.	Col.	3101	1½	Gem. L	W&W	.....	35	½E.	36 x2	½E.	57½x2	PS.	Hyd.	PG.	Fir.	A&D.	Mot.	Westcott	C44
.....	Own.	Ex-Fw.	400	DiM.	In-Rw.	390	Met.	Met.	Own.	.....	2	Lav. Spec	W&W	.....	20¾	½E.	36 x2	½E.	54½x2	PS.	Own.	PG.	None.	Dis.	Bud.	Wills Ste. Claire	A&B68
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
9½	B-L	Ex-Rw.	....	DiM.	In-Rw.	....	Met.	Met.	Eat.	.....	2	Own	W&W	.....	.....	½E.	36 x2	½E.	55 x2¼	PS.	Own.	PG.	Hay.	Art.	Hay.	Willys Knight	64-67
.....	.....	Ex-Rw.	260	DiM.	In-Rw.	247	Met.	Met.	Eat.	28	2	Own	W&W	2	.....	½E.	40 x2½	½E.	61 x2½	PS.	P&B.	PG.	Fir.	Art.	.....	Winton	40

ADO—Multiple Disk in Oil
Bet—{ Metal
Mic—Michelin
Mid—Midland
Mot—Motor Wheel Corp.
Mun—Muncie
Mut—Mutual
NP—New Process
Nor—Northway
OC—Oil Cups
Opt—Optional
P&B—Parish & Bingham
Par—Parrish
Pen—Penfield
Per—Peru
Pet—Peters
PG—Pressure Gun
Pla—Planetary
Pl—Platform
Pru—Prudden
PS—Pressed Steel
RAx—Rear Axle
Roc—Rockford
Ros—Ross
RR—Radius Rods
Rub—Rubsam
RuS—Rubber Shock Absorbers
Sal—Salisbury
Sav—Savage
SB—Spiral Bevel
SC—Special Cantilever
Sch—Schwartz
SeU—Separate Unit
Sha—Sharon
S&N—Screw and Nut
Smi—Smith
Sne—Snead
SO—Single Plate in Oil
Sp—Springs
SP—Single Plate
Spec—Special
Spi—Spicer
Stu—Standard
StM—St. Marys
T½—Transverse half elliptic
TA—Torque Arm
TB—Straight Bevel
Tx—Double Transverse ½ Elliptic
The—Thermoid
Thi—Thiemer
Tim—Timken
TT—Torque Tube
Tua—Tuare
UwT—Unit with Torque Tube
Uni—Universal
Wo—Wood
W&D—Wire and Disk
War—Warner
W-M—Willys-Morrow
W&S—Worm and Sector
W&W—Worm and Wheel
Wir—Wire
*—Balloon Tires optional at extra cost
†—Four-Wheel Brakes optional at extra cost
‡—Width of Facing
‡‡—Standard Phaeton Models
§—Optional

American Passenger Car

For Detailed Chassis Specifications, see Pages 396-399

ENGINE

MAKE AND MODEL	Make and Model	Number of Cylinders, Bore and Stroke (Ins.	Rated Horse Power (N.A.C.C.)	Piston Displacement (Cu. Ins.)	Compression Ratio	Point Suspension	Cylinders: Head	Cylinders: Number Cast in One Piece	Crankcase: Upper Half: Integral?	Crankcase: Upper Half: Material	Crankcase: Material	Valves: Arrangement	Valves: Material	Valves: Front End: Drive	Valves: Front End: Non-Metallic Gear Used On	Pistons: Material	Pistons: Length (Ins.)	Pistons: Weight (Ozs.) With Pins, Rings, Bushings	Pistons: Number of Rings	Piston Pins: Diameter and Length (Ins.)	Piston Pins: Bearing In	Connecting Rods: Material	Connecting Rods: Center to Center Length (Ins.)	Connecting Rods: Weight (Ozs.) (With Bushings and Cap)	Crankshaft: Offset (Ins.)	Crankshaft: Counterbalances Used?	Crankshaft: Diameter
American 66	H-S	40 6-3¼x5	25.35	248.9	4.0	3	Det	6	Int	SS	Ir	L	Car	He	Cam	CI	3.50	32.0	3	.87x2.94	Rod	Car	11.00	56.0	No.	No.	2.0
Anderson 41	Cont	7U 6-3⅛x4¼	23.44	195.6	4.8	3	Det	6	Int	Ir	PS	L	Car	Ch	None	CI	3.25	27.0	3	.73x1.37	Pis	Car	8.25	32.0	No.	No.	2.2
Anderson 50	Cont	8R 6-3⅜x4½	27.34	241.6	4.4	3	Det	6	Sep	Al	PS	L	Car	He	Idl	CI	4.06	35.0	3	.87x1.37	Rod	Car	10.50	52.0	No.	No.	2.0
Anderson 6	Falls	T8000 6-3½x4¼	23.44	195.6	4.6	3	Det	6	Int	Ir	PS	L	Sil	He	Cam	CI	3.50	28.0	4	.75x2.87	Pis	Car	8.12	32.5	No.	Yes	2.0
Apperson 8	Own	8-3¼x5	33.80	331.8	....	4	Det	4	Sep	Al	Al	L	Tun	He	Cran	CI	3.62	27.0	3	.87x3.06	Rod	Car	11.00	53.0	No.	Yes	2.3
Apperson 8	Own	8-3¼x5	33.80	331.8	....	4	Det	6	Int	SS	Al	I	Tunf	Ch	None	CI	3.62	27.0	3	.87x3.06	Rod	Car	11.00	53.0	No.	No.	2.0
Auburn 6-63	Weid	Spec. 6-3¼x5	25.35	248.9	4.0	3	Det	6	Int	Ir	PS	L	Car	Ch	None	CI	3.25	27.0	3	.73x1.37	Pis	Car	8.25	32.0			
Auburn 6-43	Cont	7U 6-3⅛x4¼	23.44	195.6	4.8	3																			No.	No.	2.0
Barley 6-50	Cont	7U 6-3⅛x4¼	23.44	195.6	4.8	3	Det	6	Int	Ir	PS	L	Car	Ch	None	CI	3.25	27.0	3	.73x1.37	Pis	Car	8.25	32.0	No.	No.	2.2
Bay State 1-2	Cont	8R 6-3⅜x4½	27.34	241.6	4.4	3	Det	6	Sep	Al	PS	L	Car	He	Idl	CI	4.06	35.0	3	.87x1.37	Rod	Car	10.50	52.0	38	Yes	2.0
Brewster 41-49	Own	Kni 4-4 x5½	25.60	276.5	4.6	4	Det	4	Sep	Al	Al	S	CI	Ch	None	CI	5.25	59.0	4	1.25x3.75	Rod	A St	12.25	67.0	No.	No.	2.0
Buick 4	Own	4-3⅜x4¾	18.23	170.0	3.5	3	Det	4	Sep	Al	PS	I	CI	He	None	CI			3	.87x2.94	Pis	Car	10.75		No.	No.	2.2
Buick 6	Own	6-3⅜x4¾	27.34	255.0	3.5	3	Det	6	Int	Al	Al	I	Sil	He	Cam	CI			3						No.	Yes	2.2
Cadillac 63	Own	8-3½x5½	31.25	314.4	4.8	3	Det	4	Sep	Al	PS	L	Tun	Ch	None	CI	3.29	25.5	3	.75x2.93	Pis	A St	12.50		No.	No.	2.2
Case X	Cont	8R 6-3⅜x4½	27.34	241.6	4.4	3	Det	6	Sep	Al	PS	L	Car	He	Idl	CI	4.06	35.0	3	.87x1.37	Rod	Car	10.50	52.0	No.	No.	2.2
Case Y	Cont	6T 6-3⅝x5½	31.54	234.8	4.4	3	Det	6	Sep	Al	PS	L	Car	Ch	None	CI	4.37	41.0	3	1.12x1.75	Rod	Car	11.00	51.0	Yes	No.	2.2
Chalmers Y	Own	6-3½x4½	25.35	224.0	4.7	4	Det	6	Int	Ir	PS	L	CI	Ch	None	Al	4.00		3	.31x2.87	Pis	A St	10.00			No.	2.2
Chandler 6	Own	6-3½x5	29.40	288.6	....	4	Det	6	Int			L		Ch	None	Al	4.12		3	.96x2.93		A St	10.75		No.	No.	2.2
Chevrolet Superior	Own	4-3⅛x4	21.70	170.9	4.3	3	Det	4	Int	Ir	PS	I	CI	He	None	CI	3.62	38.0	3	.85x3.31	Pis	Car	7.38	27.0			
Chrysler 6	Own	6-3 x4¾	21.60	201.4	4.5	4	Det	6	Int	Ir	PS	L	Silf	Ch	None	Al	3.43	12.0	3	.75x2.68	Pis	A St	10.00	33.5	No.	No.	1.9
Cleveland 42	Own	6-3 1/16x4½	22.50	198.9	4.6	4	Det	6	Sep	Ir	PS	L	CI	Ch	None	CI	3.50	28.8	3	.81x2.87	Rod	Car	9.50	38.5	No.	Yes	2.2
Cole 1924	Nort	311 8-3½x4½	39.20	346.3	3.5	3	Det	4	Int	Ir	Ir	L	Tun	He	Cam	Al	4.37	28.0	4	.86x3.31	Rod	A St	9.50	31.0	No.	No.	2.2
Columbia L6	Cont	7U 6-3½x4¼	23.44	195.6	4.8	3	Det	6	Int	Ir	PS	L	Car	Ch	None	CI	4.06	35.0	3	.87x1.37	Rod	Car	10.50	52.0	No.	No.	2.2
Columbia B6	Cont	8R 6-3⅜x4½	27.34	241.6	4.4	3	Det	6	Sep	Al	PS	L	Car	He	Idl	CI	3.50	28.0	4	.75x2.87	Pis	Car	8.12	32.5	No.	No.	2.2
Courier	Falls	T8000 6-3½x4¼	23.44	195.6	4.6	3	Det	6	Int	Ir	PS	L	Sil	He	Cam	CI	4.37	41.0	3	1.12x1.75	Rod	Car	11.00	51.0	No.	No.	2.2
Crawford-Dagmar 6-60	Cont	6T 6-3⅝x5¼	31.54	234.8	4.4	3	Det	6	Sep	Al	PS	L	Car	Ch	None	CI	4.25	34.0	3	.94x3.23	Pis	A St	11.00	53.0			
Cunningham V	Own	8-3¾x5	45.00	441.7	4.3	4	Det	4	Sep	Al	Al	L	Spe	He	Cam	CI										No.	2.2
																		64.0				Car	11.50		No.	No.	2.2
Daniels 23-38	Own	8-3½x5¼	39.20	404.1	....	3	Det	4	Sep	Al	Al	L	A S	He	None	CI									No.	No.	2.2
Davis 71	Cont	7U 6-3⅛x4¼	23.44	195.6	4.8	3	Det	6	Int	Ir	PS	L	Car	Ch	None	CI	3.25	27.0	3	.73x1.37	Pis	Car	8.25	32.0	No.	No.	2.2
Davis 81	Cont	8R 6-3⅜x4½	27.31	241.6	4.4	3	Det	6	Sep	Al	PS	L	Car	He	Idl	CI	4.06	35.0	3	.87x1.37	Rod	Car	10.50	52.0	No.	No.	2.2
Dodge 1924	Own	4-3⅞x4½	24.03	212.3	4.0	3	Det	4	Int	Ir	PS	L	CI	He	None	Al	4.37	28.4	4	.81x3.62	Rod	A St	9.12	44.5	No.	No.	2.2
Dorris 6-80	Own	6-4 x5	38.40	377.0	4.0	4	Det	3	Sep	Al	Al	I	Sil	He	C&A	CI	5.25	48.0	3	1.22x3.62	Rod	Car	12.00	49.0	No.	No.	2.2
Dort 27	Falls	DT8000 6-3¼x4½	23.44	207.1	4.6	3	Det	6	Int	Ir	PS	L	Car	He	None	Al	3.50	24.0	4	.74x2.87	Rod	Car	8.12	32.0	No.	No.	2.2
Duesenberg St-8	Own	8-2⅞x5	26.45	259.7	5.0	3	Det	8	Int	SS	Al	L	Sil	He	None	Al	3.44	12.0	4	.75x2.56	Pis	A St	9.75	30.0	No.	No.	2.2
duPont C	H-S	90 6-3½x5	29.40	288.6	4.0	3	Det	6	Int	Ir	PS	L	CI	He	Cam	CI	3.50	3.60	3	.87x2.94	Rod	Car	11.00	56.0		No.	2.2
Durant A22	Cont	Spec. 4-3⅞x4¼	24.03	200.4	.....	4	Det	4	Int	Al	Al	I	.....	He	None	CI	.....	.....	.....	.....	.....	A St	8.00	.....			
																							8.25		No.	No.	2.2
Eagle 6	Cont	Spec. 6-3¼x4¼	23.44	195.6	....	4	Det	6	Int	.....	.....	L	.....	Ch	None	.....	.....	.....	.....	.....	.....	.....	.....	.....	Not	No.	2.2
Elcar 6-60	Cont	8R 6-3⅜x4½	27.34	241.6	4.4	3	Det	6	Sep	Al	PS	L	Car	He	Idl	CI	4.05	35.0	3	.87x1.37	Rod	Car	10.50	52.0	No.	No.	2.2
Elcar 4-40	Lyc	CF 4-3⅝x5	21.03	205.4	4.1	3	Det	6	Sep	Ir	PS	L	C I	He	Cran	Al*	4.12	26.0	4	1.12x2.90	Flo	Car	12.00	50.0	No.	No.	2.2
Elcar 6-50	Cont	7U 6-3⅛x4¼	23.44	195.6	4.8	3	Det	6	Int	Ir	PS	L	Car	Ch	None	CI	3.25	27.0	3	.73x1.37	Pis	Car	8.25	32.0	No.	No.	2.2
Elgin 25	Falls	T8000 6-3½x4¼	23.44	195.6	4.6	3	Det	6	Int	Ir	PS	L	Car	Ch	None	CI	3.50	28.0	4	.75x2.87	Pis	Car	8.12	32.5	No.	No.	2.2
Essex 6	Own	6-2⅝x4	16.54	129.9	....	4	Det	6	Int	.....	.....	I	Sil	He	Cam	CI	3.56	3.60	3	.87x2.94	Rod	Car	11.00	56.0			
												L	.....	Ch	None	Al	3.00	.....	3	.75x2.00	Flo	A St	8.50	.....			
																									No.	No.	2.2
Flint	Cont	Spec. 6-3¾x5	27.34	268.4	....	4	Det	6	Int	.....	I	L	Sil	Ch	None	CI	.....	28.0	3	.....	.....	.....	10.50	.....	No.	No.	2.2
Ford T	Own	4-3¾x5	22.50	220.9	3.9	3	Det	4	Int	Ir	C	L	C I	He	None	CI	3.81	31.0	3	.74x3.50	Pis	Car	7.00	20.5		No.	2.2
Fox 7F	Own	6-3⅜x5	27.31	268.4	....	3	Det	1	Sep	Al	Al	I	Sil	Ch	None	Al	.....	18.0	4	.75x	Rod	A St	10.00	49.0	No.	No.	2.2
Franklin 10B	Own	6-3¼x4	25.35	199.1	4.0	3	Int	1	Sep	Al	Al	I	Chr	Ch	None	Al	3.84	24.0	4	.87x2.87	Pis	Dur	8.00	23.0			
																									No.	No.	2.2
Gardner 5	Lyc	CE 4-3 1/16x5	21.76	213.6	4.1	3	Det	4	Sep	Ir	PS	L	C I	He	Cran	Al	4.12	43.0	4	1.12x3.31	Pis	Car	12.00	50.0	No.	No.	2.2
Gray N&O	Own	4-3⅝x4	21.03	165.1	3.7	3	Det	4	Int	SS	PS	L	C I	He	None	CI	3.62	35.0	3	.74x3.25	Pis	A St	7.00	20.0			
																									No.	No.	2.2
H. C. S. 6	Own	6-3½x5	29.40	288.6	....	4	Det	6	Sep	Al	Al	I	Sil	Ch	None	CI	4.28	38.0	4	1.00x3.03	Flo	A St	11.50	55.0			
H. C. S. 4	Weid	Spec. 4-3¾x5½	22.50	242.9	....	4	Det	4				I		He		CI			4						No.	No.	2.2
Hanson 66	Cont	8R 6-3⅜x4½	27.34	241.6	4.4	3	Det	6	Sep	Al	PS	L	Car	He	Idl	CI	4.05	35.0	3	.87x1.37	Rod	Car	10.50	52.0	No.	No.	2.2
Hatfield 6-55	H-S	40 6-3½x5	25.35	248.9	4.0	3	Det	6	Int	SS	Ir	L	Sil	He	Cam	CI	3.50	32.0	3	.87x2.94	Rod	Car	11.44	57.0	No.	No.	2.2
Haynes 60	Own	6-3½x4¾	25.35	248.9	4.0	3	Det	6	Int	Ir	PS	L	Sil	He	C&A	CI	4.37	39.0	4	1.12x3.12	Rod	Car	11.62	56.0	No.	Yes	2.2
Hudson 6	Own	6-3½x5	29.40	274.2	4.6	4	Int	6	Sep	Al	PS	L	Sil	He	C&A	Al	4.02	20.0	....	1.09x2.68					No.	No.	2.2
Hupmobile R	Own	4-3½x5½	29.40	288.6	....	3	Det	6	Int	Ir	PS	L	Tun	Ch	None	Al	4.02	20.0	....	1.09x2.68							
			16.90	182.5	4.4	3	Det	4	Int	CI	PS	L	Sil†	Ch	None	Al	4.09	21.0	4	.78x2.81	Pis	Dur	11.87	27.0			
																									No.	No.	2.2
Jewett	Own	6-3¼x5	25.35	248.9	4.9	3	Det	6	Int	CI	PS	L	SS	He	None	CI	.67	..	3	1.00x2.81	Rod	Car	10.50	46.0	No.	No.	2.2
																									No.	No.	2.2
Jordan MX	Cont	Spec. 6-3 1/16x4¾	26.34	245.6	4.7	3	Det	6	Sep	Al	PS	L	St	Ch	None	CI	3.94	....	3	.86x2.86	Rod	A St	10.50	....	No.	No.	2.2
Jordan H&L	Cont	Spec. 6-3 1/16x4¾	26.34	245.6	4.7	3	Det	6	Sep	Al	PS	L	St	Ch	None	CI	3.94	....	3	.86x2.86	Rod	A St	10.50	....			
																									No.	No.	2.2
Kelsey G	Lyc	CF 4-3⅝x5	21.03	206.4	4.1	3	Det	4	Sep	CI	PS	L	C I	He	Cran	Al*	4.12	26.0	4	1.12x2.90	Flo	Car	12.00	50.0	No.	No.	2.2
King LL	Own	8-3 x5	28.80	282.7	....	3	Int	4	Sep	Al	PS	L	C I	Ch	None	CI	.....	25.0	....	.....	.....	Car	10.50	36.0			
Kissel 55	Own	6-3 1/16x5 1/8	26.34	265.0	....	4	Det	6	Int	CI	.....	L	Sil	He	Cam	CI	3.81	....	3	.94x3.06	Rod	.....	10.00	62.0	No.	No.	2.2
																									No.	No.	2.2
LaFayette 132	Own	8-3½x5¼	33.80	348.4	4.8	4	Det	4	Sep	Al	Al	L	Tun	Ch	None	CI	3.75	25.0	4	.75x3.02	Rod	A St	12.62	34.5	No.	No.	2.2
Lexington Concord	Anst	M 6-3 1/16x4½	26.34	232.7	4.5	4	Det	6	Int	SS	PS	I	Tun	Ch	None	CI	3.45	21.6	2	1.00x3.00	Rod	Car	8.50	....			
Lexington MM	Anst	C 6-3½x4½	25.35	224.0	4.5	4	Det	6	Int	SS	PS	I	Tun	Ch	None	CI	3.45	21.6	2	1.00x3.00	Rod	Car	8.50	....			

ABBREVIATIONS:

*—Optional
†—Exhaust Valve Only
§—Double End
‡—Piston Only
Acc—Accessories
A-K—Atwater Kent
Al—Aluminum
A-L—Auto-Lite
Anst—Ansted
AS— } Alloy Steel
ASt— }
ATC—Air Tube Cellular
Auto—Automatic
B—Battery
B&B—Ball & Ball
Bij—Bijur
Bos—Bosch
Bro—Bronze
C&A—Crankshaft and Accessory Drive
Cam—Camshaft
Car—Carbon
Car—Carter
Cent—Centrifugal
Ch—Chain
Chr—Chromium
CI—Cast Iron
Cle—Cleveland
Cont—Continental
Cor—Corcoran
Cran—Crankshaft
DeJ—DeJon
Del—Delco
Det—Detachable
Del—Detlaff
Det—Detroit
Dues—Duesenberg
Dur—Durston
Dyn—Dyneto
Ec—Eccentric
E&M—English & Mersick
F—Valves in Head and Side
F&T—Fin and Tube
Fed—Fedders
Flo—Floating
FlPr—Full pressure to all bearings including wrist pins
G&D—Gray & Davis
Ge—Gear
Gra—Gravity
H—Valves horizontal
H&A—Hand and Automatic
Hol—Holley
Har—Harrison
He—Helical Gear
H-S—Herschell-Spillman
I—Valves in Head
Idl—Idler
Int—Integral
Ir—Iron
Jam—Jamestown
Joh—Johnson
Kin—Kingston
Kni—Knight
L—Valves at side
L-N—Leece-Neville
Liv—Livingston

Engine Specifications

For Prices see Page 394

ENGINE																					FUEL SYSTEM			ELECTRICAL SYSTEM										MAKE AND MODEL
Crankshaft							Oiling System		Cooling System												Carbureter			Ignition				Generator and Starter			Battery			
Offset (Ins.)	Counterbalances Used?	Crankpin	Main Bearings				Type	Pump—Type	Circulation By	Pump—Type	Radiator										Make	Model	Nominal Size (Ins.)	Fuel Feed	Make	Model	Current Sources	Spark Control	Make	Generator Model	Starter Model	Make	Voltage, Ampere Hours Capacity (Amps.)		
		Diameter and Length (Ins.)	Number	Front—Diameter and and Length (Ins.)	Rear—Diameter and Length (Ins.)						Make	Core—Type																						
No.	No.	2.00x2.00	3	2.12x3.50	2.12x4.00	Sp Pr.	Ge.	Pu.	Cent.			ATC.	Str.			Vac.	A-K.		B.	S-A.	G&D.			6		American	66
No.	No.	2.00x1.27	4	2.00x1.44	2.00x2.34	Pr Cs.	Ge.	Pu.	Cent.	Fed.		Ri C.	Zen.	T4X.		Vac.	Wes.		B.	Hand.	Wes.	35AT	206651	Will.	6–111	Anderson	41
No.	No.	2.25x1.56	4	2.25x2.31	2.25x2.81	Pr Cs.	Ge.	Pu.	Cent.	Fed.		Ri C.	Zen.	UL5		Vac.	Rem.	50	B	Hand.	Rem.	918B.	708A.	Will.	6–111	Anderson	50
No.	No.	2.06x1.62	3	2.25x2.59	2.25x3.00	Sp Pr.	Ge.	TS.	None.	Own.		F&T.	Str.		1	Vac.	Rem.		B.	Hand.	Rem.	917L.	720A.	Prest.	6–100	Apperson	6
No.	Yes.	2.00x3.00	3	2.00x2.81	2.00x3.50	Fl Pr.	Ge.	TS.	None.	Own.		F&T.	Joh.	A	1¼	Vac.	Rem.	367C.	B.	Hand.	Biju.	L220.	1193.	Prest.	6–100	Apperson	8
No.	Yes.	2.37x1.50	3	2.37x2.25	2.37x3.00	Pr Cs.	Ge.	Pu.	Cent.	Jam.		Ri C.	Str.	OE2	2	Vac.	Rem.	626H.	B.	S-A.	Rem.	917J.	720J.	Exide	6	Auburn	6-63
No.	No.	2.00x1.27	4	2.00x1.44	2.00x2.34	Pr Cs.	Ge.	Pu.	Cent.	Jam.		Ri C.	Str.	OE	1	Vac.	Rem.	366N.	B.	Hand.	Rem.	922A.	720J.	Exide	6	Auburn	6-43
No.	No.	2.00x1.27	4	2.00x1.44	2.00x2.34	Pr Cs.	Ge.	Pu.	Cent.	Mod.		Ri C.	Str.	O-1	1	Vac.	Del.	483	B.	Hand.	Del.	257	840	Prest.	6– 80	Barley	6-50
No.	No.	2.25x1.56	4	2.25x2.31	2.25x2.81	Pr Cs.	Ge.	Pu.	Cent.	G&O.		Ri C.	Str.	O-2	1¼	Vac.	Del.	5256	B.	S-A.	Del.	258	181	Exide	6–105	Bay State	1-2
38	Yes.	2.00x2.00	3	2.00x2.00	2.00x6.00	Fl Pr.	Ge.	Pu.	Cent.	E&M.			Zen.	Spec.	1½	Vac.	Bos.	Z4R	M	Hand.	USL.	Spec.	Spec.	USL.	12– 90	Brewster	41-49
No.	No.	2.00x1.62	3	2.00x2.02	2.00x2.73	Sp Pr.	Ge.	Pu.	Cent.	Har.		Ri C.	Mar.	Spec.	1¼	Vac.	Del.		B.	H&A.	Del.	Spec.	Spec.	Exide.	6– 90	Buick	4
No.	No.	2.25x1.75	4	2.38x2.62	2.38x2.81	Pr Cs.	Ge.	Pu.	Cent.	Har.		Ri C.	Mar.	Spec.	1½	Vac.	Del.		B.	H&A.	Del.	Spec.	Spec.	Exide.	6–105	Buick	6
No.	Yes.	2.37x2.50	3	2.37x2.87	2.37x4.00	Pr Cs.	Ge.	Pu.	Cent.	Own.		F&T.	Own.			Pre.	Del.	Spec.	B.	H&A.	Del.	Spec.	Spec.	Exide.	6–130	Cadillac	63
No.	No.	2.25x1.56	4	2.25x2.31	2.25x2.81	Pr Cs.	Ge.	Pu.	Cent.	Own.		F&T.	Sch.	XX43.	1¼	Vac.	Del.	525	B.	Hand.	Del.	258	181	Will.	6–118	Case	X
No.	No.	2.37x1.87	4	2.37x2.41	2.37x3.06	Pr Cs.	Ge.	Pu.	Cent.	Own.		F&T.	Ray.	G	1½	Vac.	Del.	5251	B.	S-A.	Del.	256	208	Will.	6–135	Case	Y
Yes.	No.	2.25x1.50	3	2.18x2.44	2.31x3.44	Sp Pr.	Pi.	TS.	None.	MeC.		F&T.	Str.	O	1	Vac.	A-L.	IC4030-1	B.	Auto.	A-L.	GL403	M4407	West.	6–103	Chalmers	Y
	No.	2.37x1.87	4	2.40x2.62	2.50x3.25	Sp Pr.	Ge.	Pu.	Cent.			Ri C.	Str.	OE2	1¼	Vac.	Bos.	T6158	B.	S-A.	Bos.	T1033	T935.	Prest.	6–105	Chandler	6
No.	No.	1.37x1.87	3	1.37x2.31	1.75x2.68	Sp Pr.	Ge.	Pu.	Cent.	Har.		Ri C.	{Hol.	720	1	Vac.	Rem.	366P.	B.	Hand.	Rem.	950B.	711B.	{Exide	6– 90	Chevrolet	Superior
													{Zen	T4XF.	1									{Will.			
	No.	1.87x1.37	7	1.87x1.87	1.87x2.43	Fl Pr.	Ge.	Pu.	Cent.	Fed.		Ri C.	Str.	OF-2.	1¼	Vac.	Rem.	616-F	B.	S-A.	Rem.	917-T.	722-B.	West.	6–105	Chrysler	6
No.	No.	1.87x2.00	3	2.00x2.87	2.00x3.87	Sp Pr.	Ge.	Pu.	Cent.	Har.		Ri C.	Str.	OS1.	1	Vac.	Bos.	T6190.	B.	S-A.	Bos.	1021.	900.	Prest.	6– 80	Cleveland	42
No.	Yes.	2.12x2.50	3	2.00x3.37	2.12x3.94	Pr Cs.	Ge.	Pu.	Cent.	Fed.		Ri C.	Joh.	A	1½	Vac.	Del.		B.	S-A.	Del.	153	72	Will.	6–125	Cole	1924
No.	No.	2.00x1.27	4	2.00x1.44	2.00x2.34	Pr Cs.	Ge.	Pu.	Cent.			Ri C.	Str.	LB1.	1	Vac.	A-L.	GJ1005.	B.	Hand.	A-L.	4012.	4003.	USL.	6– 80	Columbia	L6
No.	No.	2.25x1.56	4	2.25x2.31	2.25x2.81	Pr Cs.	Ge.	Pu.	Cent.			Ri C.	Str.	O-1	1	Vac.	A-L.	IG1012.	B.	Hand.	A-L.			USL.	6– 80	Columbia	B6
No.	No.	2.06x1.62	3	2.25x2.59	2.22x3.00	Sp Pr.	Ge.	TS.	None.			Ri C.	Str.	OS-1.	1	Vac.	A-K.	CC.	B.	Hand.	Wes.	350T.		Will.	6– 80	Courier	
No.	No.	2.37x1.87	4	2.37x2.41	2.37x3.06	Pr Cs.	Ge.	Pu.	Cent.			Ri C.	Zen.	U6B.	1½	Vac.	Bos.	BU6	M	Hand.	Wes.			Will.	6– 80	Crawford-Dagmar	6-60
No.	No.	2.25x3.50	3	2.25x3.00	2.25x4.00	Fl Pr.	Ge.	Pu.	Cent.	G&O.		P-T.	Str.	O-3	1½	Vac.	Del.		B.	Auto.	Del.	182	183	Will.	6–120	Cunningham	V
	No.		3			Pr Cs.	Ge.	Pu.	Cent.			Ri C.	Str.		1½	Pre.	Del.	B12	B.	S-A.	Del.	170	169	Will.	6–110	Daniels	23-38
No.	No.	2.00x1.27	4	2.00x1.44	2.00x2.34	Pr Cs.	Ge.	Pu.	Cent.			Ri C.	Str.	LS-2.	1¼	Vac.	A-L.		B.	Hand.	A-L.			Will.	6– 80	Davis	71
No.	No.	2.25x1.56	4	2.25x2.31	2.25x2.81	Pr Cs.	Ge.	Pu.	Cent.			Ri C.	Str.			Vac.	A-L.		B.	Hand.	A-L.			Will.	6–110	Davis	81
No.	No.	1.62x1.87	3	1.87x2.45	1.87x2.58	Spla.	Ec.	Pu.	Cent.	Mc C.	F&T.		Ste.	25	1	Vac.	N-E.	O-10001	B.	S-A.	N-E.	3801	3801	{Will.	12– 50	Dodge	1924
																								{Exide			
No.	No.	2.25x2.00	7	2.25x2.00	2.25x2.75	Pr Cs.	Ge.	Pu.	Cent.	Mod.		Ri C.	Str.	O3	1½	Vac.	Bos.	AT6	M	Hand.	Wes.	760	751	Will.	6–139	Dorris	6-80
No.	No.	2.06x1.62	3	2.25x2.59	2.22x3.00	Pr Cs.	Ge.	TS.	None.	Jam.		Ri C.	Car.	GBO.	1	Vac.	Bos.		B.	Hand.	Bos.	649	525	USL.	6– 90	Dort	27
No.	No.	2.25x1.75	3	2.36x2.25	2.36x2.87	Pr Cs.	Ge.	Pu.	Cent.	Nat.		Ri C.	Str.	O3	1½	Vac.	Del.	242	B.	S-A.	Del.	242	200	Will.	6–119	Duesenberg	St-8
No.	No.	2.00x2.00	3	2.12x3.50	2.12x5.00	Sp Pr.	Ge.	Pu.	Cent.	Har.		Ri C.	Str.	H	1¼	Vac.	Wes.	250358	B.	Hand.	Wes.	760	711	West.	6–115	duPont	C
	No.		3			Pr Cs.	Ge.	Pu.	Cent.			Ri C.	Til.	LIA	1	Vac.	A-L.	Spec	B.	Hand.	A-L.	Spec	Spec	U S L.	6– 92	Durant	A22
		2.00x1.50	4	2.00x1.50	2.00x2.50	Sp Pr.	Ge.	Pu.	Cent.	Fed.		Ri C.	Til.		1	Vac.	A-L.	Spec	B.	Hand.	A-L.	Spec	Spec	U S L.	6– 92	Eagle	6
No.	No.	2.25x1.56	4	2.25x2.31	2.25x2.81	Pr Cs.	Ge.	Pu.	Cent.	Jam.		Ri C.	Str.	O2	1¼	Vac.	Del.	5256	B.	Auto.	Del.	258	181	Will.	6–100	Elcar	6-60
Not	No.	2.12x1.81	5	2.12x2.62	2.12x2.62	Pr Cs.	Ge.	TS.	None.	Jam.		Ri C.	Zen.	T4X.	1	Vac.	Del.	5261	B.	Auto.	Del.	265	263	Will.	6–100	Elcar	4-40
No.	No.	2.00x1.27	4	2.00x1.44	2.00x2.34	Pr Cs.	Ge.	Pu.	Cent.	Jam.		Ri C.	Star.	O2	1	Van.	A-L.	161039	B.	S-A.	A-L.	gl4007	mg4003	Will.	6– 90	Elcar	6-50
No.	No.	2.06x1.62	3	2.25x2.59	2.22x3.00	Sp Pr.	Ge.	TS.	None.	Per.		Ri C.	Str.	OS1.	1	Vac.	De J.	IA40002	B.	S-A.	De J.	1001	1002	U S L.	6–115	Elgin	25
No.	No.	1.81x1.25	7	2.00x1.00	1.50x .93	Spla.	Pi.	TS.	None.			Ri C.	Det.		1	Vac.	Bos.	T62000	B.	Auto.	Bos.	1043	910	Prest.	6– 85	Essex	6
													Str.											U S L.			
	No.	2.00x1.50	3	2.00x2.26	2.00x2.93	Pr Cs.	Ge.	Pu.	Cent.			Ri C.	{Own.		1¼	Vac.	A-L.		B.	S-A.	A-L.			{Own.	6–120	Flint	
	No.	1.25x1.50		1.25x2.00	1.25x3.12	Spla.	No.	TS.	None.	Own.	F&T.		{Hol.	G	1	Gra.	Own.		M	Hand.	Own.			{Exide	6– 80	Ford	T
	No.	1.62x	7	2.50x	2.50x	Sp Pr.	Ge.	No.	None.	Air.		None.	Zen.	U	1¼	Vac.	Sci.	AM6	B.	Hand.	Wes.	751	760	Exide	6–120	Fox	7F
No.	No.	2.00x1.68	7	2.00x2.34	2.00x2.68	Sp Pr.	Ge.	No.	None.	Air.		None.	Own.		1	Vac.	A-K.	R A	A	Hand.	Wes.	5970	6550	Will.	6–116	Franklin	10B
No.	No.	2.12x1.81	5	2.12x2.62	2.12x2.62	Pr Cs.	Ge.	TS.	None.	Fed.		ATC.	Zen.	T4X.	1	Vac.	Wes.	288761	B.	Hand.	Wes.	331328	297903	Will.	6– 91	Gardner	5
No.	No.	1.50x1.50	3	1.50x1.87	1.50x2.62	Spla.	No.	TS.	None.	Cor.		Ri C.	Sco.	O	1	V-G	Wes.	S C	B.	Hand.	Wes.	341AT	33AB.	U S L.	6– 84	Gray	N & O
No.	No.	2.50x1.75	3	2.50x2.50	2.50x2.75	Fl Pr.	Ge.	Pu.	Cent.	Fed.		Ri C.	Str.	O3	1½	Pre.	Del.	5259	B.	Auto.	Del.	258	185	Will.	6–117	H. C. S.	6
			3			Sp Pr.	Ge.	Pu.	Cent.			Ri C.	Str.		1¼	Pre.	Del.		B.	S-A.	Del.			Will.	6–	H. C. S.	4
No.	No.	2.25x1.56	4	2.25x2.31	2.25x2.81	Pr Cs.	Ge.	Pu.	Cent.			Ri C.	Mar.	M1	1½	Vac.	Del.		B.	Hand.	Del.	165	184	Prest.	6– 80	Hanson	66
No.	No.	2.00x2.00	3	2.12x3.50	2.12x4.00	Sp Pr.	Ge.	Pu.	Cent.	R-T.	P-T.		Str.	OS2.	1¼	Vac.	Bos.	T682	B.	S-A.	Bos.	1003	911	Exide	6–100	Hatfield	6-55
No.	No.	2.25x2.00	3	2.37x3.31	2.37x3.62	Sp Pr.	Ec.	Pu.	Cent.	Har.		Ri C.	Ray.	M3	1¼	Vac.	Kin.	82	B.	Hand.	L-N.	504G.	447M.	Prest.	6–125	Haynes	60
	Yes.	2.00x2.25	4	2.25x2.37	2.34x3.12	Spla.	Pi.	Pu.	Cent.			Ri C.	Ste.		1½	Vac.	Bos.		B.	H&A.	Bos.	1238	926	Exide	6–105	Hudson	6
No.	Yes.	2.00x1.62	3	2.12x1.75	2.06x3.00	Pr Cs.	Ge.	TS.	None.	MeC.		Ri C.	Str.	M	1	Vac.	A-K.	R A	B.	S-A.	Wes.	35AT	33AD.	Will.	6–117	Hupmobile	R
No.	No.	1.87x2.12	3	2.11x2.62	2.13x3.10	Pr Cs.	Ec.	Pu.	Vane.			Ri C.	{Str.		1¼	Vac.	Rem.		B.	S-A.	Wes.	913A.	721A.	{West.	6–105	Jewett	
													{Ray.	M3										{Will.			
No.	No.	2.25x1.56	4	2.25x2.34	2.50x3.06	Pr Cs.	Ge.	Pu.	Cent.	Spa.		Ri C.	Str.	O2	1¼	Vac.	Del.		B.	S-A.	Del.	234	208	Will.	6–133	Jordan	MX
No.	No.	2.25x1.56	4	2.25x2.34	2.50x3.06	Pr Cs.	Ge.	Pu.	Cent.	Spa.		Ri C.	Str.	O2	1¼	Vac.	Del.		B.	S-A.	Del.	234	208	Will.	6–133	Jordan	H & L
No.	No.	2.12x1.81	5	2.12x2.62	2.12x2.62	Pr Cs.	Ge.	TS.	None.	Liv.		Ri C.	Zen.	T4X.	1	Vac.	Bos.	T M	B.	Hand.	Bos.	1041	930	West.	6–105	Kelsey	G
			3			Sp Pr.	Ge.	TS.	None.			Ri C.	B&B.	TV10.	1¼	Vac.	A-K.	C A	B.	Hand.	Wes.	35AT	35AV.	Prest.	6–120	King	LL
No.	No.	2.25x1.75	3	2.48x2.15	2.48x2.84	Sp Pr.	Ge.	Pu.	Cent.	S-W.		Ri C.	Str.	OS2.	1¼	Vac.	Rem.	912 B	B.	Hand.	Rem.	912B.	720D.	Will.	6–117	Kissel	55
No.	No.	2.00x2.25	5	2.25x2.50	2.25x3.12	Pr Cs.	Ge.	Pu.	Cent.	Har.		ATC.	Joh.	B	2	Pre.	Del.	5221	B.	S-A.	Del.	187		Exide.	6–130	LaFayette	132
No.	No.	2.25x1.50	3	1.75x2.50	2.37x3.37	Fl Pr.	Ge.	Pu.	Cent.			Ri C.	Ray.		1½	Vac.	Con.		B.	Hand.	G&D.			Will.	12–100	Lexington	Concord
No.	No.	2.25x1.50	3	1.75x2.50	2.37x3.37	Fl Pr.	Ge.	Pu.	Cent.			Ri C.	Ray.	MR4.	1½	Vac.	Con.		B.	Hand.	G&D.	647	1533.	Will.	6–100	Lexington	MM

Lon—Long
Lye—Lycoming
M—Magneto
Mar—Marvel
MeC—McCord
Mod—Modine
Mon—Monsen
Nat—National Can
N-E—North-East
Nic—Nickel
No—None
Nort—Northway
Per—Perfex
Pi—{Piston
Pis—{Piston

PrCs—Pressure to all crankshaft and connecting rod bearings, splash to other parts
Pre—Pressure
Prest—Prestolite
PS—Pressed Steel
P-T—Plain Tube
Pu—Pump
Ray—Rayfield
Rem—Remy
RiC—Ribbon Cellular
R-T—Rome-Turney
S—Sleeve Type
S-A—Semi Automatic
Sch—Schwartz
Sche—Schebler

Scl—Scintilla
Sco—Scoe
Sep—Separate
Sil—Silcrome
Spa—Sparton
Spe—{Special
Spec—{Special
Spl—Splitdorf
Spla—Splash
SpPr—Pressure to main crankshaft bearings only, splash to connecting rods and other parts
SS—Semi Steel
St—Steel
Ste—Stewart
Str—Stromberg

S-W—Sparks-Withington
T—Valves opposite
Til—Tillotson
TS—Thermo-Siphon
Tun—Tungsten
USC—U. S. Cartridge
Vac—Vacuum
V&G—Vacuum and Gravity
Wag—Wagner
Weid—Weidely
Wes—{Westinghouse
West—{Westinghouse
Whi—Whitcomb
Will—Willard
Wisc—Wisconsin
Zen—Zenith

American Passenger Car Engine

For Detailed Chassis Specifications, see Pages 396-399

ENGINE

Make and Model	Make and Model	Number of Cylinders, Bore and Stroke (Ins.)	Rated Horse Power (N.A.C.C.)	Piston Displacement (Cu. Ins.)	Compression Ratio	Point Suspension	Cylinders: Head	Cylinders: Number Cast in One Piece	Crankcase Upper Half: Integral?	Crankcase Upper Half: Material	Crankcase: Material	Valves: Arrangement	Valves: Material	Valves Front End: Drive	Valves Front End: Non-Metallic Gear Used On	Pistons: Material	Pistons: Length (Ins.)	Pistons: Weight (Ozs.) With Pins, Rings, Bushings	Pistons: Number of Rings	Piston Pins: Diameter and Length (Ins.)	Piston Pins: Bearing In	Connecting Rods: Material	Connecting Rods: Center to Center Length (Ins.)	Connecting Rods: Weight (Ozs.) (With Bushings and Cap)
Liberty 10D	Own	6-3⅛x5	23.44	230.1		3	Det	6	Int	Al	P S	L	St	He	None	C I			3		Rod			
Lincoln	Own	8-3⅜x5	36.45	357.8		3	Det	4	Sep	Al	P S	L	Sil	Ch	None	Al	3.75	18.5	3	.87x3.12	Rod	A St	12.50	66.0
Locomobile 8	Own	6-4½x5½	48.60	524.8	4.0	4	Int	2	Sep	Bro	Al	T	Tun	He	Cam	C I	5.50		3	1.12x4.25	Rod	A St	12.00	
McFarlan SV	Wisc. Y	6-3⅜x5	27.34	268.4		3	Det	6	Int	C I	Al	I	Sil	Ch	None	Al				1.02x		Car	12.00	
McFarlan TV	Own	6-4½x6	48.60	572.5		4	Det	3	Sep	Al	Al	T	C I	He	None	Al	6.25	34.0	3	1.25x3.94	Flo	A St	12.00	94.0
Marmon 34	Own	6-3¾x5⅛	33.75	339.7	4.3	4	Det	3	Sep	C I	Al	I	Chr†	He	Cam	Al*	4.68	50.0	3	1.18x3.25	Flo	A St	10.25	72.2
Maxwell 25	Own	4-3⅝x4½	21.03	185.8	3.8	3	Det	4	Int	C I	P S	L	C I	He	Cran	Al	3.75		3	.75x3.00	Rod	A St	7.87	
Moon 6-40	Cont. 7U	6-3⅛x4¼	23.44	195.6	4.8	3	Det	6	Int	C I	P S	L	Car	Ch	None	C I	3.25	27.0	3	.73x1.37	Pis	Car	8.25	32.0
Moon 6-58	Cont. 8R	6-3⅜x4½	27.34	241.6	4.4	3	Det	6	Sep	Al	P S	L	Car	He	Idl	C I	4.06	35.0	3	.87x1.37	Rod	Car	10.50	52.0
Moon Six	Cont. Spec.	6-3⅛x4¼	23.44	195.6	4.8	3	Det	6	Int	C I	P S	L	Car	Ch	None	C I	3.25	27.0	3	.73x1.37	Pis	Car	8.25	32.0
Nash 6	Own	6-3¼x5	25.35	248.9	4.2	3	Det	6	Int	C I	P S	I	Sil	He	Cran	C I	4.00	36.5	4	.94x3.00		Car	10.00	52.5
Nash 4	Own	4-3⅜x5	18.23	178.9	3.8	3	Det	4	Int	C I	P S	I	Sil	He	Cran	S S	3.50	34.7	4	.93x2.91	Rod	Car	11.50	56.0
National BB	Own	6-3½x5¼	29.40	303.1	5.0	3	Det	6	Sep	Al	Al	I	St	Ch	None	S S	4.50	46.0	3	1.09x3.06	Pis	Car	11.50	68.0
Noma C4	Cont. 8R	6-3⅜x4½	27.34	241.6	4.4	3	Det	6	Sep	Al	P S	L	Car	He	Idl	C I	4.06	35.0	3	.87x1.37	Rod	Car	10.50	52.0
Oakland 6-54	Own	6-2 11/16x4¾	18.99	177.0	5.0	3	Det	6	Sep	C I	C I	L	Sil	Ch	None	Al	3.44	13.2	3	.75x2.37	Flo	Car	8.85	27.5
Oldsmobile 30	Own	6-2¾x4¾	18.15	169.3	4.7	3	Det	6	Int	C I	P S	L	C I	He	None	C I	3.25	21.0	3	.85x2.28	Flo	Car	8.50	26.5
Overland 91-92	Own	4-3½x4	19.60	153.9	3.0	3	Det	4	Int	C I		L		He	None	C I			3					
Packard S6	Own	6-3⅜x5	27.34	268.4	4.5	3	Det	6	Sep	Al	Al	L	Tun†	Ch	None	C I	3.38	26.0	4	.75x3.12	Rod	Car	10.00	37.0
Packard S8	Own	8-3⅜x5	36.45	357.8	4.5	4	Det	8	Sep	Al	Al	L	Tun†	Ch	None	C I	3.38	26.0	4	.87x2.92	Rod	Car	10.00	37.0
Paige 6-70	Cont. Spec.	6-3¾x5	33.75	331.4	4.2	3	Det	6	Sep	Al	P S	L	Nic	Ch	None	C I	4.50	48.0	3	1.25x3.34	Rod	Car	11.00	65.0
Peerless 6	Own	6-3½x5	29.40	288.6		3	Det	6	Int	Al	Al	L	Nic†	Ch	None				4	.75x			10.00	
Peerless 66	Own	8-3¼x5	33.80	331.8		3	Int	4	Sep	Al	Al	L	Sil†	He	Cam	C I	3.25		3	.87x3.00	Flo	Car	11.00	
Pierce-Arrow 33	Own	6-4 x5½	38.40	414.7		3	Det	6	Sep	Al	Al	T	Sil	He	None	C I			3	1.06x	Flo	A St		
Pilot 6-56	H-S. 90	6-3½x5	29.40	288.6	4.0	3	Det	6	Int	S S	Ir	L	Car	He	Cam	C I	3.50	36.0	3	.87x2.94	Rod	Car	11.00	56.0
Premier 6D	Own	6-3⅜x5½	27.34	295.3	4.2	4	Det	6	Int	Al	Al	I	S S	He	Cam	Al	4.00	20.6	3	.86x3.19	Rod	A St	11.00	48.3
Premocar 6-40	Fall. T8000	6-3⅛x4¼	23.44	195.6	4.6	3	Det	6	Int	C I	P S	I	Sil	He	Cam	C I	3.50	28.0	4	.75x2.87	Pis	Car	8.12	32.5
R & V Knight H	Own	6-3½x4½	29.40	259.8	4.8	3	Det	6	Sep	Al	Al	S	None	Ch	None	C I	4.44	34.0	2	1.00x3.31	Rod	A St	10.75	70.0
Reo T6	Own	6-3 3/16x5	24.31	239.4	2.5	4	Det	6	Int	C I	Al	F	C I†	He	Cran	Al	4.06	20.0	3	.98x2.88	Rod	Car	10.50	49.5
Revere M	Mon. M	4-4⅜x6	30.63	360.8		3	Int	4	Sep	Al	Al	H	Tun	Ch	Cam	Al	4.88	40.0	3	1.25x4.00	Pis	A St	12.00	68.0
Rickenbacker C	Own	6-3⅛x4¾	23.44	218.6	4.3	3	Det	6	Int	C I	P S	L	C I	Ch	None	C I	4.25	31.5	3	1.00x2.65	Pis	Car	10.00	35.0
Roamer 4-75E	Dues. GI	4-4¼x6	28.90	340.4		3	Int	4				H		Ch	None	Al						A St		
Roamer 6-54E	Cont. 12XD	6-3½x5¼	29.40	303.1		3	Int	6				L		He		Al						Dur		
Rollin 4	Own	4-3¼x4½	16.90	149.3			Det	4	Int	C I	P S	L	C I	He	None	Al	4.25	25.0	4	.86x2.94	Pis	Dur	9.00	20.0
Rolls Royce 40-50	Own	6-4½x4¾	48.60	453.3	4.0	3	Int	3	Sep	Al	Al	L	Sil	He	None	Al	5.10	48.7	6	1.00x4.25	Rod	A St	9.90	52.0
Sayers GL	Cont. 6J	6-3¾x5	33.75	331.4	4.3	3	Det	6	Sep	Al	P S	L	Sil	He	None	C I	4.50	43.0	3	1.12x1.75	Rod	Car	11.00	50.0
Seneca 50-51C	Lyc. CF	4-3⅝x5	21.03	206.4	4.1	3	Det	4	Sep	C I	P S	L	C I	He	Cran	Al*	4.12	26.0	4	1.12x2.90	Flo	Car	12.00	50.0
Star	Cont. Spec.	4-3⅛x4¼	15.63	130.4		4	Det	4	Int			L		Ch	None	C I						A St	8.00	
Stearns Knight 4	Own Kni	4-3¾x5⅝	22.50	248.5	4.5	3	Det	4	Sep		P S	S	None	Ch	None	C I		37.5	4			A St	12.37	56.0
Stearns Knight 6	Own Kni	6-3¼x5	25.35	248.9	4.9	3	Det	6	Sep	Al	Al	S	None	Ch	None	C I		32.0	4	.96x	Pis	A St	11.02	58.0
Stephens 20-104	Own	6-3¼x4½	25.35	224.0	4.4	3	Det	6	Int	C I	P S	I		He	Cam	C I	3.62	30.0	3	1.00x2.94	Rod	Car	8.50	53.0
Sterling Knight B6	Own Kni	6-3¼x4⅝	25.35	230.2	4.2	4	Det	6	Sep	Al	Al	S	None	Ch	None	C I	3.87	23.5	3	.87x3.03	Flo	Car	11.00	41.5
Studebaker L6	Own	6-3⅛x4½	23.44	207.1		3	Det	6	Int	C I	P S	L	C I	Ch		C I	3.38		4	.87x2.75	Pis	A St	10.00	
Studebaker S6	Own	6-3½x5	29.40	288.6		3	Det	6	Sep	C I	P S	L	C I	He	None	C I	4.73		4	.99x3.02	Pis	A St	10.00	
Studebaker B6	Own	6-3⅞x5	36.04	353.8		3	Det	6	Sep	C I	P S	L	C I	He	None	C I	4.68		4	.99x3.44	Pis	A St	10.00	
Stutz 695	Own	6-3½x5	29.40	288.6	4.4	3	Det	6	Int	C I	Al	I	Chr	Ch		C I	3.88	32.0	4	.88x3.25	Flo	Car	12.00	62.0
Stutz KLDH	Own	4-4⅜x6	30.63	360.8		4	Det	4	Sep	Al		T	Chr	He	None	C I			3			A St	14.00	
Stutz 690	Weid. 690	6-3⅜x5	27.34	268.4		4	Det	6	Int	S S		I	Chr	Ch	None	S S	3.75			.87x		Car	11.00	
Templar 6	Own	6-3⅜x5	27.34	268.4			Det	6				L				C I			4					
Velie 56 & 58	Own	6-3 3/16x4¼	24.39	203.5		3	Det	6	Int	C I	P S	I	Tun	He	Idl	C I	3.50	32.0	3	.87x2.87	Rod	Car	8.10	40.0
Washington C	Cont. 8R	6-3⅜x4½	27.34	241.6	4.4	3	Det	6	Sep	Al	P S	L	Car	He	Idl	C I	4.06	35.0	3	.87x1.37	Rod	Car	10.50	52.0
Westcott D48	Cont. 12X	6-3½x5¼	29.40	303.1		3	Int	6				L	St	He		Al		24.0			Rod	Dur	10.75	34.0
Westcott C44	Cont. 8R	6-3⅜x4½	27.34	241.6	4.4	3	Det	6	Sep	Al	P S	L	Car	He	Idl	C I	4.06	35.0	3	.87x1.37	Rod	Car	10.50	52.0
Westcott 60	Own	6-3¼x5	25.30	249.0	4.8	3	Det	6	Int	C I	P S	L	C I	He	Cam	C I	3.50	40.0	3	.87x2.90	Pis	Car	11.00	52.0
Wills St Claire A&B68	Own	8-3¼x4	33.80	265.4	4.1	4	Int	4	Sep	Al	Al	I	Sil	He	Acc	C I	3.65	28.0	§ 3	.75x3.06	Rod	A St	8.00	23.5
Willys Knight 64-57	Own Kni	4-3⅝x4½	21.03	185.8			Det	4				S		Ch	None	C I			4	.93x2.00	Pis	Car	10.00	
Winton 40	Own	6-3¾x5¼	33.75	347.9	4.5	4	Det	2	Sep	Al	Al	L	Spe	Ch	None	C I	4.25	41.0	3	1.00x3.40	Pis	A St	12.70	51.0

ABBREVIATIONS:

*—Optional
†—Exhaust Valve Only
§—Double End
‡—Piston Only
Acc—Accessories
A-K—Atwater Kent
Al—Aluminum
A-L—Auto-Lite
Anst—Ansted
AS—, **ASt**— } Alloy Steel
ATC—Air Tube Cellular
Auto—Automatic
B—Battery
B&B—Ball & Ball
Bij—Bijur
Bos—Bosch
Bro—Bronze
C&A—Crankshaft and Accessory Drive
Cam—Camshaft
Car—Carbon
Car—Carter
Cent—Centrifugal
Ch—Chain
Chr—Chromium
CI—Cast Iron
Cle—Cleveland
Cont—Continental
Cor—Corcoran
Cran—Crankshaft
DeJ—DeJon
Del—Delco
Det—Detachable
Del—Detlaff
Det—Detroit
Dues—Duesenberg
Dur—Durston
Dyn—Dyneto
Ec—Eccentric
E&M—English & Mersick
F—Valves in Head and Side
F&T—Fin and Tube
Fed—Fedders
Flo—Floating
FlPr—Full pressure to all bearings including wrist pins
G&D—Gray & Davis
Ge—Gear
Gra—Gravity
H—Valves horizontal
H&A—Hand and Automatic
Hol—Holley
Har—Harrison
He—Helical Gear
H-S—Herschell-Spillman
I—Valves in Head
Idl—Idler
Int—Integral
Ir—Iron
Jam—Jamestown
Joh—Johnson
Kin—Kingston
Knt—Knight
L—Valves at side
Liv—Livingston

Specifications—Continued

For Prices see Page 394

ENGINE																				FUEL SYSTEM				ELECTRICAL SYSTEM												MAKE AND MODEL
Crankshaft								Oiling System		Cooling System				Carburetor				Ignition				Generator and Starter			Battery											
Offset (Ins.)	Counterbalances Used?	Crankpin		Main Bearings						Radiator																											
		Diameter and Length (Ins.)		Number	Front—Diameter and and Length (Ins.)	Rear—Diameter and Length (Ins.)		Type	Pump—Type	Circulation By	Pump—Type	Make	Core—Type	Make	Model	Nominal Size (Ins.)	Fuel Feed	Make	Model	Current Sources	Spark Control	Make	Generator Model	Starter Model	Make	Voltage, Ampere Hours Capacity (Amps.)										
	No.			4				Fl Pr.	Ge.	TS.	None.		Ri C.	Str.	L-1	1	Vac.	Wag.		B.	Hand.	Wag.			Prest.	6–120										Liberty	10D
	No.	2.00x2.50		5	2.00x1.75	2.00x3.50		Pr Cs.	Ge.	Pu.		MeC.	F&T.	Str.	O3	1½	Vac.	Del.	193	B.	H&A.	Del.	193	193	Exide	6–135										Lincoln	
	No.	2.25x2.00		7	2.50x2.87	2.50x3.48		Sp Pr.	Ge.	Pu.	Cent.	G&O.	P-T.	B&B.	Spec.	1 11/16	Pre.	Del.	Spec.	B.	H&A.	Wes.	787R.	779	Westi.	12–105										Locomobile	8
	Yes	2.50x1.50		3	2.50x2.12	2.50x2.75		Fl Pr.	Ge.	Pu.	Cent.	G&O.	Ri C.	Ray.			Vac.	Del.		B.	H&A.	Del.			Will.	6–120										McFarlan	SV
	No.	2.25x2.25		4	2.37x3.00	2.37x3.25		Fl Pr.	Ge.	Pu.	Cent.	G&O.	PT.	Ray.	G5	1¾	Vac.	Spl. Wes.	SS6-2 DN	M B.	Hand.	Wes.	781	777	Will.	6–160										McFarlan	TV
	No.	2.56x2.00		3	2.74x2.25	2.74x3.75		Fl Pr.	Ge.	Pu.	Cent.	MeC.	Ri C.	Str.	O3	1½	Ge.	Del.		B.	H&A.	Del.	253	254	Prest.	6–170										Marmon	34
	No.	1.87x1.50		3	1.87x2.40	1.87x2.81		Sp Pr.	Pi.	TS.	None.	Own.	F&T.	Ste.		1	Vac.	Rem.	369C	B.	Auto.	Rem.	4914A.	712A.	West.	6–106										Maxwell	25
	No.	2.00x1.27		4	2.00x1.44	2.00x2.34		Pr Cs.	Ge.	Pu.	Cent.	Fed.	Ri C.	Str.	OE	1	Vac.	Del.		B.	S-A.	Del.	257	240	Exide	6										Moon	6-40
	No.	2.25x1.56		4	2.25x2.31	2.25x2.81		Pr Cs.	Ge.	Pu.	Cent.	Fed.	Ri C.	Str.	OE	1¼	Vac.	Del.		B.	S-A.	Del.	256	181	Exide	6										Moon	6-58
	No.	2.00x1.27		4	2.00x1.44	2.00x2.34		Pr Cs.	Ge.	Pu.	Cent.	Fed.	Ri C.	Str.	OE	1	Vac.	Del.		B.	S-A.	Del.	257	240	Exide	6										Moon	Six
	No.	2.25x2.25		3	2.25x2.75	2.25x3.25		Sp Pr	Ge.	Pu.	Vane.	Lon.	F&T.	Mar.	Spec	1¼	Vac.	Del.	Spec	B.	H&A.	Del.	Spec	Spec	Will.	6–100										Nash	6
	Yes	2.50x2.25		2	2.25x2.75	2.25x3.31		Sp Pr.	Ge.	Pu.	Vane.	Lon.	F&T.	Mar.	568	1¼	Vac.	Del.	2159	B.	H&A.	Del.	269	228	Will.	6–117										Nash	4
	No.	2.50x2.12		3	2.50x3.28	2.50x3.84		Pr Cs.	Ge.	Pu.	Cent.	Fed.	Ri C.	Ray.	G4P	1½	Vac.	Del.	5211	B.	H&A.	Wes.	760	751	Prest.	6–125										National	BB
	No.	2.25x1.56		4	2.25x2.31	2.25x2.81		Pr Cs.	Ge.	Pu.	Cent.		Ri C.	Zen.			Vac.	Del.		B.	Hand.	Del.			Will.	6										Noma	C4
	No.	1.87x1.50		3	2.00x2.00	2.12x2.18		Pr Cs.	Ge.	Pu.	Cent.	Har.	Ri C.	Str.	OE	1	Vac.	Rem.	616E	B.	Auto.	Rem.	917K.	713B.	Prest.	6–100										Oakland	6-54
	No.	1.87x1.50		3	2.00x2.68	2.12x2.18		Pr Cs.	Ge.	Pu.	Vane.	Har.	Ri C.	Zen.	T4XF.	1	Vac.	Del.	273	B.	H&A.	Del.	273	274	Will.	6–80										Oldsmobile	30
	No.			3				Spla.	No.	TS.	None.	Own.	Ri C.	Til.	Spec.	¾	Gra.	A-L.	I G	B.	Hand.	A-L.	GP	NG	U S L.	6–80										Overland	91-92
	No.	1.75x1.50		7	1.87x2.56	1.87x2.50		Pr Cs.	Ge.	Pu.	Cent.	Fed.	Ri C.	Own.		1 1/16	Vac.	Del.	5249	B.	H&A.	A-K.	5870	6484	Prest. Will.	6–100										Packard	S6
	No.	2.12x1.50		9	2.37x2.93	2.37x2.50		Pr Cs.	Ge.	Pu.	Cent.	Fed.	Ri C.	Own.		1⅛	Vac.	Del.	5260	B.	H&A.	O-D.	CE	DE	Prest. Will.	6–100										Packard	S8
	No.	2.37x1.87		4	2.37x3.18	2.37x3.34		Pr Cs.	Ec.	TS.	Vane.		Ri C.	Ray.		1½	Vac.	A-K.	R A	B.	H&A.	Rem.	923A.	722A.	West.	6–155										Paige	6-70
		2.12x		7	2.37x	2.37x		Pr Cs.	Ge.	Pu.	Cent.	Fed.	Ri C.	Joh.		1 1/16	Vac.	Del.	Spec	B.	S-A.	Del.	Spec	Spec	Exide	6–120										Peerless	6
	Yes	.87x2.00		3	2.25x2.79	2.25x2.64		Pr Cs.	Ge.	Pu.	Cent.	Fed.	Ri C.	B&B.	VV17.	1⅛	Vac.	Del.	5250	B.	H&A.	Del.	S..247.	N712.	Exide.	6–130										Peerless	66
	No.			7				Fl Pr.	Ge.	Pu.	Cent.		Ri C.	Own.		2	Pre.	Del.	Spec	B.	S-A.	Del.	Spec	Spec	Will.	6–162										Pierce-Arrow	33
	No.	2.00x2.00		3	2.12x3.50	2.12x4.00		Sp Pr.	Ge.	Pu.	Cent.		Ri C.	Til.				Wag.		B.	Auto.	Wag			Prest.	6										Pilot	6-56
	No.	1.75x2.25		3	2.19x3.13	2.30x3.80		Pr Cs.	Ge.	Pu.	Cent.	MeC.	Ri C.	Str.	O3	1½	Vac.	Del.		B.	Hand.	Del.	195	194	Prest.	6–130										Premier	6D
	No.	2.06x1.62		3	2.25x2.59	2.22x3.00		Sp Pr.	Ge.	TS.	None.		Ri C.	Str.	MD	1	Vac.	Bos.		B.	Hand.	Bos.			Exide.	6–80										Premocar	6-40
.25	No.	2.38x2.00		4	2.25x2.25	2.43x3.25		Pr Cs.	Ge.	TS.	None.	Fed.	Ri C.	Str.	OC2	1¼	Vac.	A-L.	IG4005	B.	Hand.	A-L.	1025	400	Will.	6–153										R & V Knight	H
	No.	2.25x1.68		4	2.25x2.31	2.25x3.63		Sp Pr.	Ec.	Pu.	Cent.	Own.	F&T.	Ray.	ST3	1¼	Vac.	N-E.	MRT	B.	Hand.	N-E.	3929	3581-A	Will.	6–111										Reo	T6
.75	Yes	2.31x2.50		2	2.31x4.25	2.31x4.31		Sp Pr.	Ge.	Pu.	Cent.	Fed.	Ri C.	Str.	M4	1¾	Vac.	Bos.	ZR4	M	Hand.	Wes.	781	776	Prest.	6–100										Revere	M
	Yes	1.87x2.00		3	2.18x2.18	2.31x2.68		Pr Cs.	Ge.	Pu.	Cent.	Fed.	Ri C.	Str.	O2	1¼	Vac.	Bos.	36148	B.	S-A.	Bos.	1032	133	U S L.	6–108										Rickenbacker	C
				3				Fl Pr.	Ge.	Pu.	Cent.	Mod.	Ri C.	Str.	O3	1½	Vac.	Bos.	ZR4	M	Hand.	Wes.	781R.	778	Prest.	6										Roamer	4-75E
				3				Sp Pr.	Ge.	Pu.		Mod.	Ri C.	Str.	OC2	1¼	Vac.	Spl.	649	M	Hand.	Wes.	S28564	270526	Prest.	6										Roamer	6-54E
	No.	1.75x2.00		4	1.63x2.25	2.18x2.50		Pr Cs.	Ge.	TS.	None.	MCe.	F&T.	Til.	O	1	Vac.	O-D.	Y	B.	S-A.	O-D.	DES.	DES.	U S L.	6–105										Rollin	4
	No.	2.25x1.86		7	2.25x3.00	2.25x3.75		Fl Pr.	Ge.	Pu.	Cent.	USC.	ATC.	Own.		1⅞	Pre.	Bos.	ZR6	M B.	H&A.	Spe.	Spec.	Spec.	Exide.	12–90										Rolls Royce	40-50
	No.	2.27x1.87			2.27x1.40	2.27x3.40		Pr Cs.	Ge.	Pu.	Cent.	Fed.	Ri C.	Str.	O3	1½	Vac.	Del.	5208	B.	H&A.	Del.	258	200	Will.	6–132										Sayers	GL
	No.	2.12x1.81		5	2.12x2.62	2.12x2.62		Pr Cs.	Ge.	TS.	None.	Whi.	Ri C.	Zen.	T4X	1⅛	Vac.	A-L.	IG	B.	Hand.	A-L.	4001	1001	Prest.	6–80										Seneca	50-51C
				3	1.50x1.78	1.50x2.75		Sp Pr.	Ge.	Pu.	Cent.		Ri C.	Til.	Spec.	1	Vac.	A-L.	Spec	B.	Hand.	A-L.	Spec.	Spec	U S L.	6–80										Star	
	Yes			3				Pr Cs.	Ge.	Pu.	Vane.		Ri C.	Sche.			Vac.	A-K.		B.	Hand.	A-L.			Exide	12–84										Stearns Knight	4
	No.	2.50x2.00		4	2.50x2.37	2.50x4.00		Pr Cs.	Ge.	Pu.	Vane.		Ri C.	Sche.		1¼	Pre.	A-K.		B.	Hand.	A-L.			Exide	12–86										Stearns Knight	6
	No.	2.25x1.50		3	2.12x2.00	2.25x3.00		Fl Pr.	Ge.	TS.	None.	Fed.	ATC.	Str.	OC2	1¼	Gra. Vac.	Del.	5257	B.	S-A.	Del.	258	262	U S L.	6–116										Stephens	20-104
	No.	2.12x1.62		7	2.50x2.00	2.50x3.50		Fl Pr.	Ge.	TS.	None.	Cle.	Ri C.	Str.	OS2	1¼	Vac.	Wes.	JN	B.	Hand.	Wes.	57GT.	755	U S L.	12–70										Sterling Knight	B6
		2.00x1.50		4	1.94x3.62	2.12x3.03		Sp Pr.	Ge.	Pu.	Cent.	Lon. MeC.	P-T.	Str.	OS1	1	Vac.	Wag. Rem.	9K97 626	B.	S-A.	Wag. Rem.	M355 917A.	S462 720C.	Will.	6–90										Studebaker	L6
	No.	2.00x2.18		4	2.00x2.81	2.25x3.15		Sp Pr.	Ge.	Pu.	Cent.	Lon. MeC.	P-T.	Str.	LS2	1¼	Vac.	Rem. Wag.	626F 15724	B.	S-A.	Rem. Wag.	917B. M338.	723A. S400.	Will.	6–111										Studebaker	S6
	No.	2.00x2.18		4	2.00x2.81	2.25x3.15		Sp Pr.	Ge.	Pu.	Cent.	MeC. Lon.	P-T.	B&B.	SV14.	1½	Vac.	Rem. Wag.	626F K724	B.	S-A.	Rem. Wag.	917A. M338.	723A. S400.	Will.	6–111										Studebaker	B6
	Yes	2.50x1.50		3	2.50x2.13	2.50x2.75		Pr Cs.	Ge.	Pu.	Cent.	Har.	Ri C.	Str.		1½	Vac.	Rem.	626H	B.	S-A.	Rem.	917J.	720J.	Will.	6–120										Stutz	695
	No.			3				Pr Cs.	Ge.	Pu.	Vane.		Ri C.	Str.	OP3	1½	Pre.	Del.	5209	B.	Hand.	Rem.	OF	741B.	Will.	6–125										Stutz	KLDH
	Yes	2.37x1.50		3	2.12x2.25	2.37x3.00		Fl Pr.	Ge.	Pu.	TS.		Ri C.	Str.	Spec.	1½	Vac.	Rem.	Spec	B.	Hand.	Rem.	Spec.	Spec	Will.	6										Stutz	690
	Yes							Sp Pr.	Ge.	Pu.	Cent.		Ri C.	Til.			Vac.	Dyn.		B.	S-A.	Dyn.			Prest.	6										Templar	6
	No.	2.00x1.62		4	2.00x2.25	2.00x2.75		Fl Pr.	Ge.	TS.	None.	Jam.	Ri C.	Str.	O21	1	Vac.	A-K.	Ra3	B.	S-A.	Wes.	366043	7701	Will.	6–100										Velie	56 & 58
	No.	2.25x1.56		4	2.25x2.31	2.25x2.81		Pr Cs.	Ge.	Pu.	Cent.		Ri C.	Zen.	U5	1¼	Vac.	Rem.	366H	B.	Hand.	Bij.	L220.	ED160	Exide	6–101										Washington	C
	No.							Sp Pr.	Pis.	Pu.	Vane.	Fed.	Ri C.	Ray.	M	1¼	Vac.	Del.	301	B.	S-A.	Del.	180	179	Will.	6–117										Westcott	D48
	No.	2.25x1.56		4	2.25x2.31	2.25x2.81		Pr Cs.	Ge.	Pu.	Cent.	Jam.	Ri C.	Ray.	ST	1¼	Vac.	Del.	453	B.	S-A.	Del.	258	181	Will.	6–117										Westcott	C44
	No.	2.00x1.56		7	2.12x2.31	2.12x2.68		Pr Cs.	Ge.	Pu.	Vane.	Jam.	Ri C.	Ray.	ST	1¼	Vac.	Del.	5255	B.	S-A.	Del.	258	278	Will.	6–101										Westcott	60
	No.	1.75x2.02		3	1.75x2.13	1.75x3.50		Fl Pr.	Ge.	TS.	None.	Own.	F&T.	Hol.	Own.	1⅛	Vac.	Del.	Spec	B.	Auto.	Del.	Spec	Spec	Will.	6–140										Wills St Claire	A & B68
		1.87x1.87		3	1.87x2.31	1.87x3.00		Sp Pr.	Ge.	TS.			Ri C.	Til.		1¼	Vac	A-L.		B.	Hand.	A-L.			Will.	6–120										Willys Knight	64-57
	No.	2.25x1.62		4	2.25x2.87	2.25x2.84		Pr Cs.	Ge.	Pu.	Cent.	G&O.	ATC.	Ray.	G4	1½	Vac.	Del.	5208	B.	S-A.	Del.	243	244	Will.	6–139										Winton	40

Lon—Long
Lyc—Lycoming
M—Magneto
Mar—Marvel
McC—McCord
Mod—Modine
Mon—Monsen
Nat—National Can
N-E—North-East
Nic—Nickel
No—None
Nort—Northway
Pi—
Pis— } Piston
Per—Perfex

PrCs—Pressure to all crankshaft and connecting rod bearings, splash to other parts
Pre—Pressure
Prest—Prestolite
PS—Pressed Steel
P-T—Plain Tube
Pu—Pump
Ray—Rayfield
Rem—Remy
RiC—Ribbon Cellular
R-T—Rome-Turney
S—Sleeve Type
S-A—Semi Automatic
Sch—Schwartz
Sche—Schebler

Sci—Scintilla
Sco—Scoe
Sep—Separate
Sil—Silcrome
Spa—Sparton
Spe— } Special
Spec— }
Spl—Splitdorf
Spla—Splash
SpPr—Pressure to main crankshaft bearings only, splash to connecting rods and other parts
SS—Semi Steel
St—Steel
Ste—Stewart
Str—Stromberg

S-W—Sparks-Withington
T—Valves opposite
Til—Tillotson
TS—Thermo-Siphon
Tun—Tungsten
USC—U. S. Cartridge
Vac—Vacuum
V&G—Vacuum and Gravity
Wag—Wagner
Weid—Weidely
Wes— } Westinghouse
West— }
Whi—Whitcomb
Will—Willard
Wisc—Wisconsin
Zen—Zenith

American Taxicab

MAKE AND MODEL	GENERAL				ENGINE																	ELECTRICAL SYSTEM			
												Valves				Oiling System				Fuel System		Ignition			
	Price $	Wheelbase (Ins.)	Tire Size (Ins.)	Weight with Cab (Lbs.)	Make and Model	No. of Cylinders, Bore and Stroke (Ins.)	Rated H.P. (N.A.C.C.)	Piston Displacement (Cu. Ins.)	Compression Ratio	Suspension	Cylinder Head	Number Cast in One Piece	Arrangement	Head Material	Drive	Piston Material	Type	Pump Type	Water Circulation	Carbureter Make	Fuel Feed	Make	Current Source	Generator and Starter Make	Voltage
Checker.....C	2340	117	32x4½	4100	Buda WTU	4-3⅜x5½	22.50	226.0	4.10	3	Det...	4	L...	CI....	Gear..	CI..	Pr Cs...	Gear..	Pump...	Zenith....	Vac...	Bosch...	M..	West....	6-6
Driggs.....	....	108½	30x3½	2240	Own.....	4-2⅝x4½	11.03	97.0	5.50	3	Det...	4	L...	CI....	Heli...	CI..	Sp Pr...	Gear..	Th S....	Zenith....	Gra...	Bosch...	M..	Bosch...	6-6
Elcar.....L-6	2450	118	32x4	....	Cont 8R..	6-3⅜x4½	27.34	241.5	4.40	3	Det...	6	L...	Car...	Heli...	CI..	Pr Cs...	Gear..	Pump...	Strom.....	Vac...	Delco...	B...	Delco...	6-6
Kelsey.....E	1900	115	32x4	3500	Lye CH...	4-3½x5	19.60	192.4	4.10	3	Det...	4	L...	C I...	Heli...	Al..	Pr Cs...	Gear..	Th S....	Zenith....	Vac...	Bosch...	B...	Bosch...	6-6
Pennant.....‡‡	2895	118	33x4½	3800	Buda WTU	4-3¾x5½	22.50	226.4	4.10	3	Det...	4	L...	CI....	Heli...	SS..	Pr Cs...	Gear..	Pump...	Zenith....	Vac...	Bosch...	M..	West*..	6-6
Premier.....4A	2400	112	33x4½	3850	Buda WTU	4-3¾x5⅛	22.50	226.4	4.10	3	Det...	4	L...	CI....	Heli...	SS..	Pr Cs...	Gear..	Pump...	Zenith....	Vac...	Bosch...	B...	Bosch...	6-6
Rauch & Lang.....T	2350	112	32x4	3400	Buda WU.	4-3⅜x5⅛	22.50	226.4	4.10	3	Det...	4	L...	CI....	Heli...	SS..	Pr Cs...	Gear..	Pump...	Zenith....	Gra...	Bosch...	M..	†Dync‡..	6-6
Reo.....V	2085	113	33x4½	3465	Own.....	6-3½x5	24.30	239.0	5.00	4	Det...	6	F...	CI§...	Heli...	Al..	Sp Pr...	Pist...	Pump...	Ray.....	Vac...	N.E....	B...	N-E....	6-6
Traveler.....	2600	108½	32x4	....	Buda WTU	4-3¼x5⅝	22.50	226.4	4.10	3	Det...	4	L...	CI....	Heli...	SS..	Pr Cs...	Gear..	Pump...	Zenith....	Gra...	Eisem...	M..	†Eisem..	6-6
White.....15-A	....	119	34x4½	....	Own.....	4-3¾x5½	22.50	226.4	....	3	Int...	4	L...	.....	Heli...	.....	Splash..	Pist...	Pump...	Zenith....	Gra...	.....	M..	N-E*....	6-6
Yellow Cab.....A2	1975	109	29x4½	3335	Cont V7...	4-4⅛x5	18.23	178.9	....	3	Int...	4	L...	Car...	Heli...	CI..	Pr Cs...	Pist...	Th S....	Zenith....	Gra...	Bosch...	M..	N-E....	6-6

ABBREVIATIONS:
*—At extra cost
§—Exhaust valve only
†—Starter at extra cost
‡‡—Delivered New York
‡—Starter Make Gray & Davis
Al—Aluminum
B—Battery
B-L—Brown-Lipe
B&B—Borg & Beck
Car—Carbon Steel
C I—Cast Iron
Col—Columbia
Cont—Continental
D—Disc
Det—Detachable
Detr—Detroit
Detl—Detlaff
Eng—Engine
Eisem—Eisemann
Ext-DS—External Drive Shaft
Ext-Rw—External Rear Wheels
F—Valves in Head and Side
f—Fabric
Ful—Fuller
Gra—Gravity
Gem—Gemmer
Hart—Hartford
Heli—Helical Gear
Hyd—Hydraulic
Int—Integral
Int-Rw—Internal Rear Wheel
Jon—Jones
L—Both valves at side
M—Magneto
m—Metal
M D D—Multiple Dry Disc
N-E—North-East
O C—Oil Cups
Lav—Lavine

American Steam Passen

MAKE AND MODEL			ENGINE									CONDENSER		ELECTRICAL SYSTEM				REAR AXLE					
					Cylinders		CrankshaftBearings			Oiling System					Battery								
	Wheelbase (Ins.)	Tire Size (Ins.)	Number of Cylinders, Bore and Stroke (Ins.)	Type	Point Suspension	Head	Number Cast in One Piece	Number	Dimensions Diameter & Length (Ins.)	Dimensions Diameter & Length (Ins.)	Type	Pump Type	Make	Type	Generator Make	Make	Voltage	Amp. Hrs. Capacity	Make	Type	Final Drive	Gear Ratio	Propulsion Taken By	Torque Taken By
American.....	121	33x4	2–	Verti....	3	Det...	2	2	.....	.....	Splash..	Pist...	Own....	F & T...	Own....	Exide...	12–16	80	Own..	¾ F	Sp B....	1.75	....	....
Delling.....125	(126 132)	32x4½	3–3 x4	Verti....	4	Det...	3	2	2⅛x½	2⅛x½	Fl Pr...	Gear..	Bush....	F & T...	Bijur....	Willa...	6–8	....	U. S..	½ F	S Sp B....	2.00	TT.	TT.
Doble.....De Lux	142	32x6	2–3½x5	Horiz...	3	Det...	2	4	4½x1½	4½x1½	Splash...	Pist...	Own....	F & T...	Bosch...	Exide...	12–16	100	Own..	¾ F	S Sp....	1.50	Sp..	Sp..
Doble.....Simplex	126	32x4	4–3 x3	Horiz...	2	Det...	4	3	2 x1½	2 x1½	Splash...	Pist...	Own....	F & T...	Bosch...	Exide...	12–16	100	Own..	¾ F	S Sp....	1.50	Sp..	Sp..
Stanley.....740	130	32x4½	2–4 x5	Horiz...	2	Det...	2	2	4⅜x½	4⅜x½	Splash..	Pist...	Own....	F & T...	Bijur....	Westi...	6–8	100	Own..	½ F	S Sp....	1.50	PR.	PR.

ABBREVIATIONS:
Art—Artillery
Ca—Cantilever
C&L—Cam and Lever
Det—Detachable
DIM—Direct Mechanical
Ext-Rw—External Rear Wheels
F&T—Fin and Tube
FE—Full Elliptic
FlPr—Full Pressure to all bearings
Gem—Gemmer
Horiz—Horizontal
Hyd—Hydraulic
Int-Rw—Internal Rear Wheels
Int-Ds—Internal Drive Shaft
OC—Oil Cups

American Gasoline Rail

MAKE AND MODEL	GENERAL CHARACTERISTICS							ENGINE						ELECTRICAL SYSTEM						TRANSMISSION				
		Weights			Overall					Horsepower				Ignition				Battery		Clutch	Gearset			
	Type of Car	Total Weight of Car (Lbs.)	Weight on Driving Wheels (Lbs.)	Passenger Capacity	Length, Ft.-Ins.	Width, Ft.-Ins.	Total Number of Wheels	Make	Number of Cylinders, Bore and Stroke (Ins.)	Rated (N.A.C.C.)	Brake	R.P.M. at Normal Track Speed	Location	Make	Current Source	Generator Make	Starter Make	Make	Voltage and Amp. Hrs. Capacity	Make	Type	Make	Number of Forward and Reverse Speeds	Location	Sanders Type
Brill.....55	Spe...	29000	18000	55	43–0	8–4	8	Midw.	4-4¾x6	36.10	68	1600	FinB....	Eise...	M..	L-N...	L-N...	Opt...	12–180	B-L...	MDD.	B-L...	6–3	Eng...	Gra...
Edwards.....	Spe...	25000	3000	50	40–0	8–0	8	Midw.	4-4¾x6	36.10	71	1600	FinB....	Eise...	M..	West..	West..	Exi...	.....	Cot...	MDD.	Cot...	4–4	SeU...	Pre...
†F. W. D.....D	CAT..	12000	8000	65	26–0	8–6	8	Wisc..	6-5 x5½	60.00	....	1350	FouB....	N-E..	B...	N-E..	N-E..	Wil...	12–225	HeS...	MDO.	Cot...	4–4	UwJ..	Gra...
F. W. D.....	CAT..	20000	.....	24	21–7	9–6	4	Wisc..	6-5 x5½	60.00	94	1400	FinB....	Eise...	M..	N-E..	N-E..	Wil...	12–176	HeS...	MDO.	Cot...	4–4	SeU...	Pre...
Indiana.....404	Spe...	23000	13000	65	38–9	9–10	8	Wauk.	4-5 x6¼	40.00	60	1400	FouB....	Eise...	M..	Remy.	Remy.	Wil...	6–178	B&B..	SP....	B-L...	4–4	SeU...	Pre...
M. A. C.....440	Spe...	11000	11000	0	22–6	8–0	4	Buda..	4-4½x6	32.40	60	1100	FouB....	Bosc..	M..	Bosc..	Bosc..	Wil...	6–160	B-L...	MDD.	B-L...	4–4	SeU...	Pre...
Mack.....AH	Spe...	56000	19000	51	55–0	9–9	8	Own..	6-5¼x7	44.10	120	1275	DonT...	Apol..	M..	USL..	L-N...	Exi...	32–240	Own..	MDD.	Own..	4–4	SeU...	Pre...
Mack.....ACX	CAT..	22000	9000	35	35–0	9–9	8	Own..	4-5 x6	40.00	50	1250	FouB....	Spli...	M..	L-N...	L-N...	Exi...	12–160	Own..	SP....	Own..	4–4	Eng...	Gra...
Mack.....AB	CAT..	12270	7000	30	28–8	8–6	6	Own..	4-4¼x5	28.90	30	1425	FouB....	Spli...	M..	L-N...	L-N...	Exi...	12–160	Own..	MDD.	Own..	4–4	Eng...	Pre...
Meister.....30	Spe...	16000	12000	30	30–0	7–0	6	Midw.	4-4¾x6	36.10	50	1000	RinB....	Bosc..	M..	L-N...	L-N...	KCB..	12–120	B-L...	MDD.	B-L...	4–4	Eng...	Pre...
Meister.....50	Spe...	24300	17500	50	40–0	10–6	8	Wisc..	6-5¾x7	79.35	120	1000	RinB....	Bosc..	M..	L-N...	L-N...	Wil...	12–120	Del...	MDD.	Own..	4–4	Axl...	Pre...
†White.....SR	CAT..	35000	9000	38	31–6	9–6	6	Own..	4-4¼x5½	28.90	....	1500	FinB....	L-N...	B...	L-N...	L-N...	Wil...	12–80	Own..	SP....	Own..	3–1	Eng...	Gra...

ABBREVIATIONS:
†—1923 Specifications
A&E—Air & Electric
Apol—Apollo
Auto—Automobile Type
Axl—Unit with Axle
B—Battery
B&B—Borg & Beck
B-L—Brown-Lipe
Bosc—Bosch
CAT—Converted Auto Truck
Cha—Chain
Cot—Cotta
C-S—Coil and ½ Elliptic
DE—Double End
Del—Detlaff
DonT—Directly on Trucks
DR—Double Reduction
Eise—Eisemann
Eng—Unit with engine
Exi—Exide
F—Front
FinB—Front Inside Body
FouB—Front Outside Body
F&R—Front and Rear
Gra—Gravity
HeS—Hele Shaw
L-FE—Longitudinal Elliptic
L ½ E—Longitudinal Semi Elliptic
L-N—Leece-Neville

Specifications

TRANSMISSION												RUNNING GEAR									
Clutch		Gearset			Universal Joints		Rear Axle					Brakes				Steering Gear					MAKE AND MODEL
												Type and Location									
Make	Type	Make	Location	No. of Forward Speeds	Number and Make	Type	Make	Type	Final Drive	Gear Ratio	Propulsion Taken By	Torque Taken By	Foot	Hand	Shackles Type	Front Axle Make	Make	Type	Chassis Lubrication	Length of Rear Spring (Ins.)	Wheels, Type	Frame Make	
Ful.....	M D D...	Ful...	Eng...	3	1-Blood..	m....	Col...	¾ F..	S B...	4.87	Sp....	Sp....	Ext-Rw...	Int-Rw....	m...	Col...	Jon...	S & N.....	P G...	57⅝	D..	P & B...	Checker.....C
Ful.....	M D D...	Ful...	Eng...	3	2-Spicer.	m....	Own..	½ F..	S B...	4.75	Sp....	Sp....	Ext-Rw...	Int-Rw....	m...	Sal..	.....	.....	P G...	....	D..	.....	Driggs.....
Warn...	M D D...	Warn.	Eng...	3	1-Hart..	m....	Sal...	¾ F..	S B...	4.70	Sp....	Sp....	Ext-Rw...	Int-Rw....	m...	Sal...	Gem..	W & W...	O C...	52	...	Smi.....	Elcar.....L-6
B & B...	S P.....	W-M..	Eng...	3	2-Spicer.	m....	Sal...	¾ F..	S B...	5.10	Sp....	Sp....	Ext-Rw...	Int-Rw....	m...	Sal...	Lav..	S & N.....	P G...	55	D..	Hyd....	Kelsey.....E
Ful.....	M D D...	Ful...	Eng...	3	2-Blood.	m....	Col...	¾ F..	S B...	4.87	Sp....	Sp....	Ext-Rw...	Int-Rw....	m..	Col...	Jon...	S & N.....	P G...	57	D..	Sav.....	Pennant.....‡‡
Ful.....	M D D...	Ful...	Eng...	3	2-Blood.	m....	Col...	¾ F..	S B...	4.70	Sp....	Sp....	Ext-Rw...	Int-Rw....	m..	Col...	Own..	W & W...	P G...	57½	D..	P & B...	Premier.....4A
Dell....	M D D...	Detr..	Eng...	3	2-Spicer.	m....	Sta...	½ F..	S B...	5.10	Sp....	Sp....	Ext-Rw...	Ext-D S...	m...	Sta...	Gem..	W & W...	P G...	59½	D..	P & B...	Rauch & Lang.....T
Own....	M D D...	Own..	SeU...	3	4-Own...	m-f...	Own..	½ F..	S B...	4.70	Sp....	T A...	Ext-Rw...	Int-Rw....	m...	Own..	Own..	B P S.....	P G...	55	D..	Own....	Reo.....V
B-L.....	M D D...	W-M..	Eng...	3	2-Spicer.	m....	Col...	.....	S B...	....	Sp....	Sp....	Ext-Rw...	Int-Rw...	m...	Col...	Gem..	W & W...	P G...	....	A..	.....	Traveler.....
Own....	S P.....	Own..	SeU ..	4	.....	.....	Own..	½ F..	S B...	.....	Rad..	Sp....	Ext-Rw...	Int-Rw....	M..	Own..	Own..	W & S....	P G...	....	.....	.....	White.....15-A
B-L.....	M D D...	B-L...	Eng...	3	2-Spicer.	m....	Tim...	½ F..	S B...	4.90	Sp....	Sp....	Ext-Rw...	Ext-D S...	r...	Tim...	Gem..	W & W...	P G...	56	D..	.....	Yellow Cab.....A2

Opt—Optional
P & B—Parish & Bingham
B P S—Bevel, Pinion & Sector
P G—Pressure Gun
PrCs—Pressure to all crankshaft and connecting rod bearings, splash to other parts
Pist—Piston
r—Rubber

Rad—Radius Rods
Ray—Rayfield
Sal—Salisbury
Sav—Savage
S B—Spiral Bevel
SeU—Separate Unit
S & N—Screw and Nut
Sp—Springs

S P—Single Plate
Sp Pr—Pressure to main crankshaft bearings only, splash to connecting rods and other parts.
Smi—Smith
S S—Semi Steel
Sta—Standard
Strom—Stromberg

T A—Torque Arm
Th S—Thermo Siphon
Tim—Timken
Vac—Vacuum
Warn—Warner
West—Westinghouse
W & S—Worm and Sector
W & W—Worm and Wheel
W-M—Willys-Morrow

ger Car Specifications

BRAKES					FRONT AXLE			STEERING GEAR				SPRINGS				FRAME				MAKE AND MODEL
Service			Emergency									Front		Rear						
Type and Location	Braking Area (Sq. Ins.)	Application	Type and Location	Braking Area (Sq. Ins.)	Make	Model	Inclination of Steering Pivots (Deg.)	Make	Model	Number of Revolutions Locked to Locked Positions of Road Wheels	Outside Diameter of Turning Circle (Ft.)	Type	Type	Length and Width (Ins.)	Type	Length and Width (Ins.)	Make	Material	Chassis Lubrication	Wheels Type	
Ext-Rw.....	....	Di M...	Int-Rw.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40x2	F E...	51 x2½	Own....	P S...	P G...	Disk....	American.....
Int-Rw.....	220	Hyd....	Int-Ds....	85	U. S.....	A...	O.....	Ross....	C...	2	38	C & L...	½ E..	36x2	C A...	52 x2½	Own....	P S...	P G...	Disk....	Delling.....125
Int-Rw.....	.....	Di M...	Int-Rw.....	.....	Own.....	.....	.....	Gem....	M...	.....	.....	W & W...	½ E..	44x2	½ E..	58 x2½	Own....	P S...	O C...	Disk....	Doble.....De Luxe
Ext-Rw.....	.....	Di M...	Int-Rw.....	.....	Own.....	.....	.....	Gem....	M...	.....	.....	W & W...	½ E..	.....	½ E.	.....	Own....	P S...	O C...	Disk....	Doble.....Simplex
Ext-Rw.....	116	Di M...	Int-Rw....	90	Stand...	3070	1½	Ross....	E...	1⅛	45	C & L...	½ E..	41x2	F E...	40½x2	Smi.....	P S...	P G...	Art.....	Stanley.....740

PR—Perch Rods
Pist—Piston
PS—Pressed Steel
PG—Pressure Gun

½-E—Semi Elliptic
Smi—Smith
½-F—Semi Floating
SpB—Spiral Bevel

Sp—Springs
Stand—Standard
¾-F—Three-quarter Floating
SSp—Straight Spiral

US—United States
Verti—Vertical
Westi—Westinghouse
Willa—Willard
W&W—Worm and Wheel

Car Specifications

DRIVING TRUCK					PONY TRUCK		BRAKES				CONTROL					SPRINGS		BODY DIMENSIONS					MAKE AND MODEL
	Wheels						Service		Emergency			Transmission						Overall		Length			
Location	Total Number	Number Driving	Axle Bearings, Type	Final Drive	Number of Wheels	Axle Bearings, Type	Type	Application	Type	Application	Car Control	Throttle	Clutch	Gearshift	Reverse	Front Type	Rear Type	Inside Length, Ft.-Ins.	Inside Width, Ft.-Ins.	Baggage Compt. Ft.-Ins.	Passenger Compt., Ft.-Ins.	Smoking Compt., Ft.-Ins.	
F.....	4	4	Roll....	SB....	4	Roll....	Rail....	Air.....	Rail....	Air...	DE...	Man..	Man..	Man..	Man.	L-½ E..	L-½ E..	42-0	8-0	Var...	Var...	Var.....	Brill.....55
R.....	8	4	.....	Cha...	4	Roll....	Rail....	Air.....	Rail....	Air...	SE....	Man..	Man..	Man..	Man.	L-½ E..	L-½ E..	Var...	Var...	Var...	Var...	Var.....	Edwards.....
F&R..	8	4	Roll....	SB....	0	None...	Rail....	Air.....	Auto....	Man..	SE....	Man..	Man..	Man..	Man.	L-FE...	L-FE...	Var...	Var...	Var...	Var...	Var.....	†F. W. D..... D
R.....	4	4	Roll....	SB....	0	None...	Rail....	Air.....	Rail....	Air...	SE....	Man..	Man..	Man..	Man.	L-½ E..	L-½ E..	Var...	Var...	Var...	Var...	Var.....	F. W. D.....
R.....	4	4	Ball.....	Wo...	4	Plai.....	Rail....	Air.....	Rail....	Air...	SE....	Man..	Man..	Man..	Man.	L-FE...	L-FE...	31-2	9-2	Var...	Var...	Var.....	Indiana.....404
F&R..	4	4	Roll....	SB....	0	None...	Rail....	Air.....	Rail....	Air...	SE....	Man..	Man..	Man..	Man.	L-½ E..	L-½ E.	22-6	8-0	Var...	Var...	Var.....	M. A. C.....440
R.....	4	2	Roll....	SB....	4	Roll....	Rail....	Air.....	Rail....	Man..	DE...	A&E..	A&E..	A&E.	A&E.	L-½ E..	L-½ E.	51-0	9-3	13-9	29-5	8-6	Mack..... AH
R.....	4	2	Roll....	DR....	4	Roll....	Rail....	Air.....	Rail....	Man..	SE....	Man..	Man..	Man.	Man.	L-½ E..	L-½ E.	27-6	9-3	6-0	21-4	None...	Mack.....ACX
R.....	2	2	Roll....	DR....	4	Roll....	Auto....	Man....	Auto....	Man..	SE....	Man..	Man..	Man.	Man.	L-½ E..	L-½ E.	21-9	7-3	Var...	Var...	Var.....	Mack..... AB
R.....	2	2	Ball.....	SB....	4	Ball.....	Rail....	Man....	Rail....	Man.	SE....	Man..	Man..	Man.	Man.	Rub....	C-S.....	30-0	6-6	6-6	19-0	6-6	Meister..... 30
R.....	4	2	Ball.....	SB....	4	Ball.....	Rail....	Air.....	Rail....	Man..	SE....	Man..	Man..	Man.	Man.	Rub....	C-S.....	39-6	10-0	10-0	30-0	None...	Meister..... 50
R.....	2	2	Ball.....	DR....	4	Plai.....	Auto....	Man....	Rail....	Man.	SE....	Man..	Man..	Man.	Man.	L-½ E..	C-S.....	.....	.....	.....	.....	.....	†White.....SR

M—Magneto
Man—Manual
MDD—Multiple Dry Disk
MDO—Multiple Disk in Oil
Midw—Midwest
N-E—North East

Opt—Optional
Plai—Plain
Pre—Pressure
R—Rear
Rail—Railroad Type
RinB—Rear inside Body

Roll—Roller
Rub—Rubber
SB—Spiral Bevel
SE—Single End
SeU—Separate Unit

SP—Single Plate
Spe—Special Railroad Design
Spli—Splitdorf
UwJ—Unit with Jackshaft
Var—Varies

West—Westinghouse
Wil—Willard
Wauk—Waukesha
Wisc—Wisconsin
Wo—Worm

American Export Passenger Car Specifications

(Applying to Standard Phaeton Model)

MAKE AND MODEL	Number of Passengers	EXTRA FOR BOXING		BOXING CUBICAL Contents (Cu. Ft.)		MAGNETO		RIGHT HAND DRIVE		Make of Metric Speedometer	Metric Gasoline Gauge Fitted?	WHEEL OPTIONS					COLORS		TIRES			
												Wire		Disk								
		Complete Phaeton	Chassis	Complete Phaeton	Chassis	Make	Extra Charge	Fitted?	Extra Charge			Fitted?	Extra Charge	Fitted?	Extra Charge	Number of Wheels per Car	Options	Extra Charge	Metric Sizes Optional?	Size (mm. or Ins.)	Tire Type	Cord or Fabric?
American C	4	$80	.....	359	.....	Bosch	$75	Yes	$3	Van Sic	No	Yes	$100	Yes	$160	5	3 Colors	No	Yes	610x105	SS	Cord
Anderson 50	7	45	.....	450	.....	Bosch	35	Yes	25	Stewart	No	Yes	75	Yes	85	5	Yes	No	Yes	33x4	SS	Cord
Apperson 6	5	100	$75	.....	.....	Bosch	Yes	No	0	.....	Yes	Yes	100	Yes	50	4	None	0	Yes	32x4	SS	Cord
Apperson 8	5 or 7	100	.....	415	370	No	0	Yes	50	Van Sic	No	Yes	125	Yes	125	5	Yes	$75	No	33x5	SS	Cord
Auburn 6-43	5	65	.....	.....	.....	Bosch	50	Yes	30	Stewart	No	Yes	100	Yes	25	5	No	0	Yes	31x4	SS	Cord
Auburn 6-63	5	65	.....	.....	.....	Bosch	50	Yes	30	Stewart	No	Yes	100	Yes	45	5	Blue or Red	50	Yes	32x4½	SS	Cord
Buick 24-35	5	Yes	Yes	310	129	.....	.....	Yes	Yes	Stewart	No	Yes	Yes	No	0	5	Black	.....	No	31x4	SS	Cord
Buick 24-49	7	Yes	Yes	361	159	.....	.....	Yes	Yes	Stewart	No	Yes	Yes	No	0	5	Blue	.....	No	32x4½	SS	Cord
Buick 24-45	5	Yes	Yes	345	152	.....	.....	Yes	Yes	Stewart	No	Yes	Yes	No	0	5	Black	.....	No	32x4	SS	Cord
Buick 4-55	4	Yes	Yes	365	159	.....	.....	Yes	Yes	Stewart	No	Yes	Yes	Yes	Yes	5	Red	.....	No	32x4½	SS	Cord
Cadillac V-63	7	Yes	Yes	429	420	.....	.....	Yes	Yes	Van Sic	Yes	Yes	Yes	Yes	.....	5	Yes	No	No	33x5	SS	Cord
Cardway	5	75	50	348	.....	Bosch	50	Yes	No	Stewart	No	Yes	.....	Yes	.....	.....	Blue or Red	No	No	31x4	SS	Cord
Case X	5	Yes	Yes	.....	.....	Bosch	Yes	Yes	No	Stew-War	No	Yes	Yes	Yes	Yes	5	Yes	Yes	No	32x4½	SS	Cord
Case Y	7	Yes	Yes	.....	.....	Bosch	Yes	Yes	No	Stew-War	No	No	0	Yes	Yes	5	Yes	Yes	No	33x5	SS	Cord
Chalmers 1923	7	50	Yes	343	336	Bosch	35	Yes	No	Stewart	No	Yes	No	Yes	No	5	Yes	25	Yes	815x120	SS	Fabr
Chandler 32A	5	70	50	399	368	Bosch	46	Yes	No	Stewart	No	Yes	Yes	Yes	Yes	5	No	No	No	32x4	SS	Cord
Chevrolet Superior	5	Yes	Yes	208	100	.....	.....	Yes	Yes	Stewart	No	.....	No	No	0	4	Black-Grey	Yes*	No	30x3½	CL	Fabr
Cleveland 42	5	67	50	340	292	Bosch	Yes	Yes	No	Stewart	No	Yes	Yes	Yes	Yes	5	No	No	No	31x4	SS	Cord
Cole Master	7	85	75	462	340	No	0	No	0	Stewart	No	Yes	35	Yes	35	5	Red	50	No	33x5	SS	Cord
Columbia Special 6	4	Yes	Yes	341	244	Bosch	Yes	Yes	No	Stewart	No	Yes	Yes	Yes	Yes	4	Blue-Black	.....	No	31x4	SS	Cord
Courier	5	70	60	325	325	Bosch	50	Yes	No	Stewart	Yes	Yes	No	Yes	No	5	5 Colors	No	Yes	32x4	SS	Cord
Cunningham U-4	6	Yes	Yes	640	.....	No	0	No	0	Yes	No	Yes	No	Yes	75	6	Optional	No	Yes	33x5	SS	Cord
Davis 71	5	75	60	330	265	No	0	Yes	No	Stew-War	No	No	0	Yes	No	5	Blue	No	Yes	31x4	SS	Cord
Davis 81	4 or 5	75	60	390	265	No	0	Yes	No	Stew-War	Yes	No	0	Yes	No	5	All Colors	No	Yes	32x4½	SS	Cord
Dodge Brothers	5	Yes	Yes	328	290	Eisem	Yes	Yes	No	North-Ea	No	No	0	Yes	Yes	5	No	0	No	32x4	SS	Cord
Dorris 6-80	7	125	Yes	.....	.....	Bosch	.....	Yes	No	Van Sic	.....	Yes	90	Yes	130	5	Yes	Yes	.....	33x5	SS	Cord
Dort 27	5	Yes	Yes	.....	.....	Bosch	No	Yes	.....	.....	No	Yes	.....	Yes	.....	5	2 Colors	.....	No	31x4	SS	Cord
Duesenberg 8	5 or 7	150	150	.....	.....	.....	No	No	.....	No	No	Yes	No	No	0	5	Yes	100	Yes	895x135	SS	Cord
Durant A-22	5	45	35	266	168	Simms	45	Yes	20	Stewart	No	Yes	30	No	0	4	No	0	No	31x4	SS	Fabr
Earl 40	5	50	45	350	.....	Splitd	35	Yes	No	Stew-War	No	Yes	40	Yes	40	4	No	0	No	32x4	SS	Cord
Essex	5	Yes	Yes	271	271	.....	.....	Yes	.....	Stew-War	No	Yes	Yes	.....	.....	5	No	0	No	31x33¾	SS	Cord
Ford T	5	Yes	Yes	164	65	Yes	No	No	0	None	No	No	0	No	0	4	No	0	.....	30x3½	CL	Fabr
Franklin Series 10	5	75	60	389	375	No	0	No	0	Waltham	No	Yes	45	Yes	45	5	Yes	75	No	32x4	SS	Cord
Gardner T-R & G	5	60	50	320	125	Bosch	55	Yes	No	Stewart	Yes	No	0	Yes	75	4	Yes	No	No	32x4	SS	Cord
Hanson 66	5	75	Yes	.....	.....	Bosch	50	Yes	No	Stewart	Yes	Yes	100	Yes	100	5	5 Colors	No	Yes	31x4	SS	Cord
H. C. S. 6	5	75	75	355	340	.....	.....	No	0	Warner	No	Yes	No	Yes	No	6	Optional	No	No	32x4½	SS	Cord
Haynes 60	5	90	85	447	350	Bosch	65	Yes	15	Stew-War	Yes	Yes	90	Yes	No	5	Optional	100	Yes	32x4½	SS	Cord
Hudson Super 6	7	Yes	Yes	386	363	.....	.....	Yes	.....	Stew-War	No	Yes	Yes	Yes	.....	5	No	.....	No	34x4½	SS	Cord
Hupmobile R	5	50	65†	360	471†	Splitd	No	Yes	No	Stew-War	No	Yes	Yes	Yes	Yes	5	No	0	No	32x4	SS	Cord
Jordan H	4	100	100	403	273	No	No	No	No	Stew-War	Yes	Yes	80	Yes	35	5	2 Colors	No	No	32x4½	SS	Cord
Jordan MX	5	100	100	373	257	No	No	No	No	Stew-War	Yes	Yes	80	Yes	35	5	2 Colors	No	No	32x4	SS	Cord
King L	7	70	70	420	380	Splitd	75	Yes	No	No	Yes	Yes	50	No	No	5	Green-Blue	25	Yes	32x4½	SS	Cord
Kissel 55	5	95	.....	468	.....	Remy	50	No	0	Stewart	No	Yes	125	Yes	42	6	Yes	50	No	32x4	SS	Cord
LaFayette	7	75	75	.....	.....	No	0	No	0	No	No	No	0	Yes	Yes	5	All Colors	Yes	No	33x5	SS	Cord
Lexington 23	5 or 7	90	75	340	300	Bosch	60	Yes	No	Stewart	Yes	Yes	100	Yes	100	5	3 Colors	65	No	32x4½	SS	Cord
Lincoln	4 or 7	97	.....	489	.....	No	0	No	0	Waltham	No	Yes	Yes	Yes	Yes	5–6	3 Colors	No	No	33x5	SS	Cord
Locomobile 48	5 or 7	110	Yes	490	450	No	0	No	0	Stew-War	Yes	Yes	275	Yes	300	6	18 Colors	No	No	35x5	SS	Cord
Marmon 34	7	110	100	503	427	Opt	.....	No	0	Van Sic	Yes	Yes	135	Yes	100	5	Blue	No	Yes	32x4½	SS	Cord
Maxwell 5	5	45	45	331	320	Bosch	27	Yes	No	Stewart	No	Yes	35	Yes	No	5–4	No	No	No	31x4	SS	Cord
McFarlan 1924	7	150	75	575	.....	Splitd	No	Yes	No	Stew-War	No	Yes	No	Yes	No	6	All Colors	No	Yes	33x5	SS	Cord
Moon 6-58	7	70	Yes	360	275	Bosch	35	Yes	No	Stewart	No	Yes	75	Yes	90	5	2 Colors	No	Opt	32x4½	SS	Cord
Moon 6-40	5	65	60	325	235	.....	.....	Yes	No	Stewart	No	Yes	50	Yes	35	5	Blue	No	Opt	31x4	SS	Cord
Moon A	5	.....	60	310	220	No	0	Yes	No	Yes	No	Yes	Yes	Yes	Yes	5–6	None	0	Yes	31x4	SS	Cord
Nash 691	5	60	50	.....	.....	Eisem	40	Yes	25	Stewart	No	Yes	50	Yes	25	4–5	Red	25	No	33x4	SS	Cord
Nash 692	7	60	50	.....	.....	Eisem	40	Yes	25	Stewart	No	Yes	50	Yes	25	4–5	Red	25	No	34x4½	SS	Cord
Nash 41	5	60	50	.....	.....	Eisem	40	Yes	25	Stewart	No	Yes	50	Yes	25	4–5	Red	25	No	33x4	SS	Cord
National BB	7	100	Yes	488	407	Bosch	No	Yes	200	Warner	No	Yes	75	Yes	125	5	Optional	85	Yes	32x4½	SS	Cord
Oakland 6-54	5	Yes	Yes	319	135	.....	.....	Yes	Yes	Stewart	No	Yes	Yes	Yes	.....	5	Blue	.....	No	31x4	SS	Cord
Oldsmobile 30	5	Yes	Yes	289	130	.....	.....	Yes	Yes	Stewart	No	No	0	No	.....	4	Black	0	No	31x4	SS	Cord
Overland 91	5	37	Yes	272	91	Bosch	50	Yes	.....	Stewart	No	Yes	49	Yes	Yes	5	Black	0	No	30x3½	SS	Cord
Packard 6-126	5	75	Yes	407	386	No	0	Yes	100	Waltham	No	Yes	Yes	Yes	Yes	5	All Colors	Yes	No	33x4½	SS	Cord
Packard 6-133	7	75	Yes	425	400	No	0	Yes	100	Waltham	No	Yes	Yes	Yes	Yes	5	All Colors	Yes	No	33x4½	SS	Cord
Packard 8-136	5	90	Yes	440	432	No	0	Yes	100	Waltham	No	No	0	Yes	No	5	No	0	No	33x5	SS	Cord
Packard 8-143	7	90	Yes	461	439	No	0	Yes	100	Waltham	No	No	0	Yes	No	5	No	0	No	33x5	SS	Cord
Paterson 23-6-52	5	65	.....	393	.....	.....	.....	Yes	.....	Warner	No	Yes	100	Yes	110	5	3 Colors	No	Yes	32x4½	SS	Cord
Pierce-Arrow 33	4 or 7	130	115	527	473	.....	.....	No	0	Waltham	No	Yes	230	Yes	230	6	Yes	No	No	33x5	SS	Cord
Pilot 6-50	7	90	.....	406	.....	No	0	Yes	No	Stewart	.....	Yes	105	Yes	135	4–5	6 Colors	55	Yes	32x4½	SS	Fabr
Premier 6-D	7	75	Yes	396	325	No	0	Yes	No	Warner	No	Yes	125	Yes	170	5	3 Colors	No	Yes	32x4½	SS	Cord
R. E. O. T-6	5	50	.....	348	.....	Bosch	.....	No	.....	North-Ea	No	Yes	35	Yes	No	4	3 Colors	No	Yes	32x4	SS	Cord
Rickenbacker Series B	5	75	75	337	237	.....	.....	Yes	No	Stewart	No	No	0	Yes	No	4	Blue-Red	No	No	32x4	SS	Cord
Roamer 6-54-E	7	70	.....	371	.....	Splitd	No	Yes	25	Warner	Yes	Yes	No	Yes	75	5	All Colors	No	Yes	820x120	SS	Opt
Sayers DP	5	90	.....	350	.....	Bosch	75	Yes	55	Stewart	No	Yes	125	Yes	150	5	3 Colors	30	.....	33x4	SS	Cord
Stanley 740	5 or 7	105	Yes	470	440	No	0	No	.....	Van Sic	No	Yes	Yes	No	0	5	Yes	Yes	No	32x4½	SS	Cord
Stephens 20	4	85	Yes	360†	289	Splitd	30	Yes	15	Stewart	No	Yes	125	Yes	0	5	Red-Blue	.....	No	33x4½	SS	Cord
Studebaker Light 6	5	Yes	Yes	326	.....	Bosch	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	5	Grey-Black	Yes	Yes	31x4	SS	Cord
Studebaker Special 6	5	Yes	Yes	371	.....	Splitd	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	5	3 Colors	No	Yes	32x4	SS	Cord
Studebaker Big 6	7	Yes	Yes	407	.....	Splitd	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	5	Grey-Blue	No	Yes	33x4½	SS	Cord
Stutz 6-90	5	102	102	412	.....	No	0	Yes	Yes	Stewart	No	Yes	No	Yes	No	5	Blue-Red	No	Yes	32x4	SS	Cord
Stutz 4	6	102	102	444	320	No	0	Yes	No	Stewart	.....	Yes	No	Yes	Yes	5	Blue-Red	No	No	32x4½	SS	Cord
Stutz 695	7	102	102	444	320	No	0	No	0	Yes	No	Yes	No	Yes	No	5	2 Colors	No	No	32x4½	SS	Cord
Velie 58	5	80	65	394	273	Splitd	35	Yes	25	Stewart	No	Yes	50	Yes	30	5	No	No	Yes	32x4	SS	Cord
Wills St. Claire A-68	5	75	Yes	372	286	.....	.....	No	0	Yes	No	No	0	Yes	.....	5	3 Colors	.....	No	32x4½	SS	Cord
Willys-Knight 64	5	43	43	330	330	Bosch	50	Yes	No	Stewart	No	Yes	54	Yes	20	5	Blue	.....	No	32x4	SS	Cord
Willys-Knight 67	7	45	45	357	342	Bosch	50	Yes	No	Stewart	No	Yes	60	Yes	20	5	Purple	.....	No	32x4½	SS	Cord
Westcott 44	5	75	.....	435	.....	Bosch	75	Yes	No	Van Sic	No	No	0	Yes	100	5	2 Colors	50	No	32x4½	SS	Cord
Westcott 48	7	75	.....	475	.....	.....	75	No	.....	Van Sic	No	Yes	125	Yes	100	6	2 Colors	50	No	32x4½	SS	Cord
Winton 40	7	Yes	.....	520	425	.....	.....	Yes	75	Stew-War	No	Yes	100	Yes	200	5	5 Colors	Yes	Yes	33x5	SS	Cord

ABBREVIATIONS: *—Extra cost for grey †—Two in one box **CL**—Clincher **Eisem**—Eisemann **Fabr**—Fabric **North Ea**—North East **Opt**—Optional **Splitd**—Splitdorf **Stew-War**—Stewart-Warner **Van Sic**—Van Sicklen

Front-Wheel Brakes Chief Feature of British Design

WITHOUT question, the sudden appearance of front-wheel brakes is the outstanding development in British car design for 1924. Whereas twelve months ago only one car, the miniature (7 hp.) Austin, had front brakes, 13 per cent now have them with pedal actuation and on 1.25 per cent they appear operated by the hand lever. They are all of the internal shoe type, for no British maker uses contracting band front brakes and only 4 per cent of cars have band brakes on the rear wheels. There has been a slight increase in transmission brakes—mainly of the external shoe pattern.

Quite a number of small six-cylinder models have made their first appearance recently. Thirty per cent of new models are sixes, half of these being of less than 125 cubic inch capacity. Taking all sizes, 21.5 per cent of British cars have six cylinders. There is only one eight, which has its cylinders in line, but two-cylinder models, air-cooled light cars still comprise 6 per cent of the total. An increase (15 to 19 per cent) is to be noted in the integral cylinder block and crankcase design, but unit power-plants are but slightly more popular than last year (46 to 48 per cent).

Overhead valves have again increased, being now represented on 38 per cent of engines and having risen progressively from 21.5 per cent in 1920-21. Sleeve valve models are in 8 per cent of engines, an increase from 7 per cent last year and the year before and 5 per cent in 1920. Overhead camshafts have increased in number and percentage, being found on 24 per cent of the overhead valve engines designed.

Thermo-siphon cooling has receded slightly (58 to 53), a trend accounted for in some measure by the larger number of cars below 100 cubic inch with four passenger bodies and with high-speed engines which are somewhat prone to overheat without a pump.

Hollow crankshaft lubrication is back where it was (54 per cent) in 1921 after dropping to 44 per cent last year. The splash system has receded but splash and pressure to the main bearings shows an increase from 18 to 22 per cent.

Even some of almost the smallest engines now have pressure feed to the main bearings and big-ends through a drilled crankshaft, but full pressure systems (with leads to the wrist pins) comprise only 2 per cent.

There has been a steady increase in aluminum pistons since 1920. In that year there were but 26 per cent of engines so fitted, but in subsequent years the proportion has risen to 33, 40 and now 56 per cent. Duralumin connecting rods are few and far between, only three models having them as standard, but it is known that many more firms are experimenting in the same direction.—M. W. BOURDON.

Trends in British Passenger Car Design

No. of Cylinders	Percentage
Two	6
Four	71
Six	21.5
Eight	1.5
Cylinder Head	
Detachable	77
Integral	23
Valve Location	
Side	49
Overhead	38
Both sides	1.5
Inlet over exhaust	3.5
Sleeve	8
Piston Material	
Cast iron	44
Aluminum	56
Camshaft Location	
In crankcase	91
Overhead	9
Camshaft Drive	
Silent chain	51
Helical gears	35
Spur gears	8
Roller chain	6
Camshaft Gear Material	
Steel	53
Cast iron	16
Non metallic	15
Bronze	16
Engine Lubrication	
Splash	22
Splash and pressure	22
Hollow crankshaft	54
Full pressure	2
Fuel Feed	
Gravity	58
Vacuum	40
Pressure	2
Ignition: Type	
Magneto	79
Battery	16
Optional	3
Magneto and battery	2
Clutch: Type	
Single dry plate	36.5
Cone	48
Dry multi disk	7
Multi disk in oil	7
Single plate in oil	1.5
Rear Axle, Type:	
Semi floating	55
¾ floating	14
Full floating	31
Final Drive	
Spiral bevel	77.5
Worm	19
Straight bevel	3.5
Brakes	
Hand:	
Internal rear wheels	82
External rear wheels	4
External transmission	11
Internal transmission	1.75
Internal front wheels	1.25
Pedal:	
Internal rear wheels	73
External rear wheels	1.75
External transmission	10
Internal transmission	2.25
Internal front wheels	13
Steering Gear	
Worm and worm wheel	56
Worm and segment	20
Screw and nut	13
Planetary	4.75
Rack and pinion	1.75
Bevel	1.5
Cam	3.5
Chassis Lubrication	
Pressure gun	76
Grease cups	20
Oil cups	3
Central automatic	1

British Passenger Car

MAKE	GENERAL				ENGINE																					
														Camshaft			Cooling				Fuel System			Ignition		
	H.P.	Wheelbase (Inches)	Track (Inches)	Tire Size (Inches)	Number of Cylinders	Bore & Stroke (Inches)	Piston Displacement (Cu. In.)	Number of Point Susp.	Cylinder Head	Valve Location	Cylinders Cast	Cylinders Integral With Crankcase	Piston Material	Location	Drive	Gear Material	Medium	Temperature Control	Water Circulation	Oiling System	Carbureter Make	Mixture Heating	Feed	Make	Type	
A. B. C.	12	102	47	28x3½	2	3.6x3.6	73	4	Det.	I.	1	Sep.	Ci.	CC.	Spur.	St.	Air.	None.	None.	Splash.	Zenith.	Exh.	Grav.	Fellow	Mag.	
A. C.	12	105	45	26x3	4	2.7x3.9	91	3	Det.	L.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	ThS.	PrCs.	Claudel.	Wat.	Grav.	ML.	Mag.	
A. C.	16	111	45	28x3½	6	2.5x3.9	122	4	Det.	I.	6	Int.	Ci.	OH.	Chain.	No.	Wat.	None.	Pump.	PrCs.	Solex.	Wat.	Grav.	ML.	Mag.	
Airedale	14	123	50	30x3½	4	2.9x4.7	129	3	Det.	I.	4	Sep.	Ci.	CC.	Heli.	St.	Wat.	None.	Pump.	PrCs.	Zenith.	Man.	Vacu.	Lucas.	Mag.	
Alvis	11	112	49	30x3½	4	2.6x4.3	97	4	Int.	L.	4	Sep.	Al.	CC.	Heli.	Br.	Wat.	None.	ThS.	PrCs.	Solex.	Exh.	Grav.	ML.	Mag.	
Alvis	12	108	49	28x3½	4	2.6x4.0	91	4	Det.	I.	4	Sep.	Al.	CC.	Heli.	Br.	Wat.	None.	ThS.	PrCs.	Solex.	Exh.	Grav.	ML.	Mag.	
Angus Sanderson	14	123	52	32x4	4	3.0x5.0	140	4	Det.	L.	4	Sep.	Ci.	CC.	Heli.	Ci.	Wat.	None.	ThS.	PrCs.	Zenith.	Man.	Grav.	Lucas.	Mag.	
Argyll	12	111	48	30x3½	4	2.6x4.0	91	4	Det.	S.	4	Int.	Ci.	CC.	Heli.	NM.	Wat.	None.	ThS.	SpPr.	Solex.	Wat.	Grav.	ML.	Mag.	
Argyll	15	120	53	32x4½	4	3.1x5.1	158	3	Det.	S.	4	Sep.	Ci.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.	Zenith.	Man.	Vacu.	BTH.	Mag.	
Ariel	9	91	46	26x3	2	3.3x3.4	61	3	Int.	L.	1	Sep.	Ci.	CC.	Heli.	Ci.	Wat.	None.	ThS.	Splash.	Cox.	Wat.	Grav.	ML.	Mag.	
Armstrong Siddeley	14	111	56	30x3½	4	3.0x4.0	112	4	Det.	I.	4	Int.	Ci.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.	Claudel.	Exh.	Grav.	BTH.	Mag.	
Armstrong Siddeley	18	121	54	32x4	6	2.7x4.1	146	4	Int.	I.	3	Sep.	Ci.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.	Claudel.	Exh.	Grav.	BTH.	Mag.	
Armstrong Siddeley	30	135	56	36x5	6	3.5x5.2	302	4	Int.	I.	3	Sep.	Ci.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.	Claudel.	Exh.	Grav.	BTH.	Mag.	
Arrol Johnston	14	117	56	30x4	4	2.9x4.7	129	2	Det.	L.	4	Int.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.		Man.	Vacu.		Mag.	
Arrol Johnston	20	120	56	32x4½	4	3.5x5.1	200	3	Det.	L.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.		Man.	Vacu.		Mag.	
Ashton Evans	11	96	48	26x3	4	2.6x4.3	91	4	Int.	L.	4	Sep.	Ci.	CC.	Chain.	No.	Wat.	None.	ThS.	PrCs.	Cox.	Exh.	Grav.	ML.	Mag.	
Aster	18	126	56	32x4½	6	2.7x4.5	158	3	Det.	I.	6	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.	Zenith.	Wat.	Vacu.	BLIC.	Bat.	
Astin Martin	11	105	51	28x3½	4	2.6x4.2	90	4	Int.	L.	4	Sep.	St.	CC.	Heli.	St.	Wat.	None.	Pump.	PrCs.	SU.	Wat.	Vacu.	Scint.	Mag.	
Austin	7	75	40	26x3	4	2.2x3.0	45	3	Det.	L.	4	Sep.	Al.	CC.	Heli.	St.	Wat.	Non .	ThS.	Splash.	Zenith.	Man.	Grav.		Mag.	
Austin	12	112	52	30x4	4	2.8x4.0	101	3	Det.	L.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.	Zenith.	Man.	Vacu.		Mag.	
Austin	20	130	56	32x4½	4	3.7x5.0	210	3	Det.	L.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.	Zenith.	Man.	Vacu.		Mag.	
Bayliss Thomas	9	99	46	26x3	4	2.3x3.7	65	4	Det.	I.	4	Sep.	Al.	CC.	Heli.	St.	Wat.	None.	ThS.	PrCs.	Zenith.	Wat.	Grav.	Lucas.	Mag.	
Bayliss Thomas	10	99	46	26x3	4	2.5x3.9	75	4	Det.	L.	4	Int.	Al.	CC.	Chain.	No.	Wat.	None.	ThS.	PrCs.	Zenith.	Exh.	Grav.	Lucas.	Mag.	
Bayliss Thomas	11	102	46	26x3	4	2.6x4.3	91	4	Det.	L.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	ThS.	PrCs.	Zenith.	Exh.	Grav.	Lucas.	Mag.	
Bayliss Thomas	12	114	52	30x4	4	2.7x4.7	108	4	Det.	I.	4	Sep.	Al.	CC.	Heli.	St.	Wat.	None.	ThS.	PrCs.	Zenith.	Wat.	Vacu.	Lucas.	Mag.	
Bean	12	102	49	30x3½	4	2.7x4.7	108	4	Int.	L.	4	Sep.	Ci.	CC.	Chain.	No.	Wat.	None.	ThS.	FlPr.	Zenith.		Grav.	ML.	Mag.	
Bean	14	114	56	31x4	4	2.9x5.3	145	4	Det.	L.	4	Int.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.	Smith.	Wat.	Vacu.	ML‡	Mag.	
Beardmore	12	114	50	30x3½	4	2.8x4.5	112	3	Det.	I.	4	Sep.	Ci.	OH.	Chain.	No.	Wat.	None.	ThS.	PrCs.	Zenith.	Exh.	Grav.		Mag.	
Belaize	10	105	48	28x3½	4	2.3x3.9	68	3	Det.	I.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.	Zenith.	Wat.	Grav.	CAV.	Bat.	
Belaize	14	114	48	30x4	6	2.3x3.9	102	3	Det.	I.	6	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.	Zenith.	Wat.	Vacu.	CAV.	Bat.	
Bentley	16	130	56	32x4½	4	3.1x5.8	183	3	Int.	I.	4	Sep.	Al.	OH.	Bevel.	St.	Wat.	Ther.	Pump.	PrCs.	Smith.	Wat.	Vacu.	ML.	Mag.	
Beverley Barnes	28	150	58	34x4½	8	2.9x4.4	242	4	Det.	I.	8	Sep.	Al.	OH.	Heli.	St.	Wat.	None.	Pump.	SpPr.	Zenith.	Man.	Vacu.	Scint.	Mag.	
B. S. A.	10	96	48	26x3	2	3.5x3.3	65	4	Int.	I.	1	Sep.	Al.	CC.	Spur.	St.	Air.	None.	None.	Splash.			Grav.		Mag.	
B. S. A.	14	106	48	28x3½	4	2.8x4.1	106	4	Det.	S.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	SpPr.	Own		Vacu.		Bat.	
B. S. A.	16	111	48	28x3½	6	2.5x3.7	113	4	Det.	S.	6	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	SpPr.	Own		Vacu.		Bat.	
Calcott	10	93	45	26x3	4	2.5x4.3	88	4	Int.	L.	4	Sep.	Ci.	CC.	Chain.	No.	Wat.	None.	ThS.	Splash.	Zenith.	Man.	Grav.	Lucas.	Mag.	
Calcott	12	102	45	28x3½	4	2.7x4.3	100	4	Int.	L.	4	Sep.	Ci.	CC.	Chain.	No.	Wat.	None.	ThS.	Splash.	Zenith.	Man.	Grav.	Lucas.	Mag.	
Calcott	14	110	48	30x4	4	2.9x4.7	129	4	Int.	L.	4	Sep.	Ci.	CC.	Chain.	No.	Wat.	None.	ThS.	Splash.	Zenith.	Man.	Grav.	Lucas.	Mag.	
Calthorpe	10	101	48	28x3	4	2.5x3.7	76	4	Int.	L.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	ThS.	SpPr.	Cox.	Man.	Grav.	ML.	Mag.	
Calthorpe	12	108	48	28x3	4	2.7x3.9	91	4	Det.	L.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	SpPr.	Smith.	Man.	Grav.	ML.	Mag.	
Charron Laycock	10	98	45	28x3½	4	2.5x4.3	88	4	Det.	L.	4	Sep.	Ci.	CC.	Heli.	NM.	Wat.	None.	ThS.	PrCs.	Zenith.	Wat.	Vacu.	Simms	Mag.	
Cluley	10	96	45	26x3	4	2.5x4.3	88	4	Det.	L.	4	Sep.	Ci.	CC.	Spur.	St.	Wat.	None.	ThS.	PrCs.	Solex.	Wat.	Grav.	Lucas.	Mag.	
Cluley	16	114	52	30x3½	6	2.5x4.3	133	4	Det.	L.	6	Sep.	Ci.	CC.	Chain.	No.	Wat.	None.	ThS.	PrCs.	Solex.	Wat.	Grav.	Lucas.	Mag.	
Clyno	10	105	48	26x3	4	2.6x3.9	83	4	Int.	L.	4	Int.	Ci.	CC.	Chain.	No.	Wat.	None.	ThS.	Splash.	Cox.	Man.	Grav.	Fellow	Mag.	
Clyno	13	105	48	28x3½	4	2.7x3.9	91	3	Det.	L.	4	Int.	Ci.	CC.	Spur.	NM.	Wat.	None.	ThS.	Splash.	Cox.	Wat.	Grav.	Fellow	Mag.	
Crossley	14	112	54	30x3½	4	3.1x4.7	146	3	Det.	L.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	ThS.	Splash.	Solex.	Man.	Grav.	ML.	Mag.	
Crossley	20	124	55	32x4½	4	3.5x5.9	285	4	Det.	L.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.	Smith.	Man.	Vacu.	ML.	Mag.	
Crossley	25	135	54	36x4½	4	4.0x5.5	276	3	Det.	L.	2	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.	Smith.	Wat.	Grav.	Fellow	Mag.	
Crouch	12	105	46	26x3	4	2.7x3.9	91	3	Det.	L.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	ThS.	SpPr.	Cox.	Exh.	Grav.		Bat	
Cubitt	16	126	54	32x4	4	3.1x5.5	171	4	Det.	L.	4	Int.	Al.	CC.	Heli.	NM.	Wat.	None.	ThS.	PrCs.		Wat.	Vacu.			
Daimler	16	117	50	30x4	6	2.5x3.7	114	4	Det.	S.	6	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	SpPr.	Own	Exh.	Vacu.		Bat	
Daimler	20	129	52	32x4½	6	2.9x4.1	163	4	Det.	S.	6	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	SpPr.	Own	Exh.	Vacu.		Bat	
Daimler	21	135	57	36x5	6	2.9x4.5	184	4	Det.	S.	6	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	SpPr.	Own	Exh.	Vacu.		Bat	
Daimler	25	133	52	32x4½	6	3.2x4.5	250	4	Det.	S.	6	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	SpPr.	Own	Exh.	Vacu.		Bat	
Daimler	30	141	57	36x5	6	3.5x5.1	302	4	Det.	S.	2	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	SpPr.	Own	Wat.	Pres.		Ma	
Daimler	35	141	52	34x4½	6	3.8x5.1	350	4	Det.	S.	2	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	SpPr.	Own	Wat.	Vacu.		Bat	
Daimler	45	146	57	36x6	6	4.3x5.1	451	4	Det.	S.	2	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	SpPr.	Own	Wat.	Pres.		Ma	
Day Leeds	10	93	45	26x3	4	2.5x3.9	76	4	Int.	T.	4	Int.	Ci.	CC.	Chain.	No.	Wat.	None.	ThS.	Splash.	SU.	Wat.	Vacu.	ML.	Ma	
Deemster	12	96	46	28x3½	4	2.7x3.9	91	4	Det.	L.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	ThS.	SpPr.	Claudel.	Exh.	Grav.	Fellow	Ma	
Eric Campbell	10	102	43	26x3½	4	2.6x4.3	91	4	Int.	L.	4	Sep.	Ci.	CC.	Chain.	No.	Wat.	None.	ThS.	SpPr.	Zenith.	Exh.	Grav.	BTH.	Ma	
Guy	20	130	56	32x4½	8	2.8x4.9	248	4	Det.	L.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.	Smith.	Wat.	Vacu.	BLIC.	Ma	
Guy	14	112	52	30x3½	4	2.8x4.7	118	4	Det.	L.	4	Sep.	Al.	CC.	Heli.	NM.	Wat.	None.	ThS.	Splash.	Zenith.	Wat.	Vacu.	Lucas.	Ma	
G. W. K.	10	111	48	26x3	4	2.6x3.9	89	4	Int.	Ci.	CC.	Chain.	No.	Wat.	None.	ThS.	SpPr.				Grav.			Ma	
Gwynne	8	87	42	26x3	4	2.1x3.9	58	3	Det.	I.	4	Sep.	Al.	CC.	Heli.	St.	Wat.	None.	Pump.	PrCs.		Wat.	Grav.			
Hampton	9	96	48	28x3½	4	2.5x3.9	76	4	Det.	I.	4	Int.	Ci.	CC.	Heli.	St.	Wat.	None.	ThS.	Splash.	Zenith.	Wat.	Grav.	BTH.	Ma	
Hampton	12	108	48	28x3½	4	2.7x4.7	109	4	Det.	I.	4	Sep.	Ci.	CC.	Heli.	St.	Wat.	None.	ThS.	PrCs.	Zenith.	Wat.	Vacu.		M	
Hands	10	99	46	26x3	4	2.5x3.9	76	4	Int.	L.	4	Sep.	Ci.	CC.	Chain.	No.	Wat.	None.	ThS.	PrCs.		Man.	Grav.		M	
Hands	15	108	48	30x4	6	2.5x3.9	112	3	Det.	I.	6	Sep.	Ci.	OH.	Bevel.	St.	Wat.	None.	Pump.	PrCs.	Solex.	Wat.	Grav.		Be	
H. E.	13	114	50	32x4	4	2.8x4.7	120	4	Det.	L.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	ThS.	Splash.	Zenith.	Man.	Vacu.	CAV.	B	
H. E.	13	117	50	32x4	4	2.8x4.7	119	4	Det.	L.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	ThS.	Splash.	Zenith.	Man.	Vacu.		O	
Hillman	11	102	48	28x3½	4	2.6x4.7	97	4	Det.	L.	4	Sep.	Al.	CC.	Heli.	Br.	Wat.	None.	ThS.	Splash.	Zenith.	Man.	Grav.	ML.	M	
Hodgson	12	108	48	26x3	4	2.7x3.9	91	4	Det.	L.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	ThS.	PrCs.	Zenith.	Wat.	Grav.	Fellow	M	
Horstman	12	114	50	28x3½	4	2.7x3.9	91	3	Det.	L.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	ThS.	PrCs.	Cox.	Wat.	Grav.	ML.	M	
Humber	8	94	46	26x3	4	2.2x3.9	59	4	Det.	F.	4	Sep.	Al.	CC.	Heli.	Ci.	Wat.	None.	ThS.	Splash.	Cox.	Wat.	Grav.	Lucas.	M	
Humber	11	109	55	30x3½	4	2.7x4.7	105	4	Det.	F.	4	Int.	Al.	CC.	Heli.	Ci.	Wat.	None.	ThS.	Splash.	Vox.	Wat.	Vacu.	Lucas.	M	
Humber	16	123	57	32x4½	4	3.1x5.5	171	4	Det.	F.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.	Cox.	Wat.	Vacu.			
Jowett	7	84	45	26x3	2	3.0x4.0	55	3	Int.	L.	1	Sep.	Ci.	CC.	Spur.	Ci.	Wat.	None.	ThS.	PrCs.	Zenith.	Wat.	Grav.	Brolt.	B	
Lagonda	12	108	47	28x3½	4	2.7x3.7	86	4	Int.	F.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	ThS.	SpPr.	Zenith.		Grav.			
Lanchester	21	129	54	34x4½	6	2.9x4.5	175	4	Det.	I.	6	Sep.	Al.	OH.	Worm.	Br.	Wat.	Ther.	Pump.	PrCs.	Smith.	Wat.	Vacu.	Waifd.	M	
Lanchester	40	141	58	36x5	6	4.0x5.0	376	4	Int.	I.	3	Sep.	Al.	OH.	Worm.	Br.	Wat.	Ther.	Pump.	FlPr.	Smith.	Wat.	Vacu.			

ABBREVIATIONS—
†—Magneto Optional
‡—Battery Optional
¾—Four wheel brakes optional
Al—Aluminum
AM—Automatic from central point
B&M—Battery and Magneto
Bat—Battery
Bev—Bevel
Bevel—Spiral Bevel
Br—Bronze
C—Central
Ca—Cam
Cant—Cantilever
CC—In Crankcase
Ci—Cast Iron
Co—Cone
Det—Detachable
Eccen—Eccentric Rods
½ El—Half Elliptic
¼ El—Quarter Elliptic
¾ El—Three Quarter Elliptic
T ½ El—Transverse Half Elliptic
Eng—Unit with engine
E-Rw—External Rear Wheels
E-Tr—External Transmission
Exh—Exhaust
Ex—Extra Cost
F—Valves in head and side
Fab—Fabric
FF—Full Floating
½ Fl—Semi Floating
¾ Fl—Three-quarter Floating
FlPr—Pressure to all bearings including wrist pins
FR—Friction Drive
GC—Grease Cups
Grav—Gravity
Heli—Helical Gears
HS—Hollow Pressed Steel
I—Valves in head
I-Fw—Internal Front Wheels
Int—Integral
I-Rw—Internal Rear Wheels
I-Tr—Internal Transmission
L—Valves at side
Lea—Leather
Mag—Magneto
Mag—Magnetic Transmission

Chassis Specifications

ELECTRICAL SYSTEM					TRANSMISSION					REAR AXLE					RUNNING GEAR							MAKE
Ignition						Gearset			Universals						Springs		Brakes					
Make	Type	Equipped With Generator	Voltage	Equipped With Starter	Clutch Type	Location	Number of Speeds	Lever Location	Front	Rear	Type	Final Drive	Gear Ratio	Propulsion Taken By	Torque Taken By	Front	Rear	Hand	Foot	Steering Type	Wheels Type	Chassis Lubrication	
Fellow	Mag.	Yes	6	Ex.	SP.	Sep.	4	C.	Fab.	No.	¾Fl.	Sp.	4.5	TT.	TT.	¼El.	¼El.	I-Rw.	E-Rw.	SN.	Disk	GC.	A. B. C.
ML.	Mag.	Yes.	12	Yes.	SP.	RA.	3	R.	Met.	No.	½Fl.	Wo.	4.5	TT.	TT.	¼El.	¼El.	E-Tr.	I-Rw.	Ca.	Disk	GC.	A. C.
ML.	Mag.	Yes.	12	Yes.	SP.	RA.	3	R.	Met.	No.	½Fl.	Wo.	4.3	TT.	TT.	¼El.	¼El.	E-Tr.-	I-Rw.	Ca.	Disk	GC.	A. C.
Lucas.	Mag.	Yes.	12	Yes.	SP.	Sep.	4	R.	Fab.	No.	FF.	Sp.	3.7	Sg.	TT.	½El.	½El.	I-Rw.	I-Rw.	WW	Disk	PG.	Airedale
ML.	Mag.	Yes.	12	Yes.	Co.	Sep.	4	R.	Fab.	Fab.	FF.	Sp.	4.5	Sg.	Sg.	½El.	½El.	I-Rw.	I-Rw.	WW	HS.	PG.	Alvis
ML.	Mag.	Yes.	12	Yes.	Co.	Sep.	4	R.	Fab.	Fab.	FF.	Sp.	4.3	Sg.	Sg.	½El.	½El.	I-Rw.	I-Rw.	WW	Wire	PG.	Alvis
ML.	Mag.	Yes.	12	Yes.	MD.	Sep.	3	C.	Met.	No.	½Fl.	St.	4.2	TT.	TT.	½El.	Cant.	I-Rw.	I-Rw.	WW	HS.	GC.	Angus Sanderson
Lucas.	Mag.	Yes.	12	Yes.	SP.	Eng.	4	O.	Fab.	Fab.	FF.	Sp.	4.5	Sg.	Sg.	½El.	½El.	I-Rw.	I-Rw.	WW	Disk	PG.	Argyll
ML.	Mag.	Yes.	12	Yes.	SP.	Eng.	4	R.	Met.	No.	½Fl.	Sp.	4.3	TT.	TT.	½El.	Cant.	I-Rw.	I-Rw.	WW	Disk	PG.	Argyll
BTH.	Mag.	Yes.	12	Yes.	SP.	Eng.	4	R.	Met.	No.	FF.	Sp.	4.3	TT.	TT.	½El.	Cant.	I-Rw.	I-Rw.	WW	Disk	PG.	Ariel
ML.	Mag.	Yes.	6	Ex.	SP.	TT.	3	R.	Fab.	No.	½Fl.	Sp.	5.0	TT.	TT.	¼El.	¼El.	I-Rw.	I-Rw.	WW	Disk	PG.	Armstrong Siddeley
BTH.	Mag.	Yes.	6	Yes.	SP.	TT.	3	C.	Met.	No.	¾Fl.	Sp.	4.7	TT.	TT.	¼El.	¼El.	I-Rw.	I-Rw.	Spla	Disk	PG.	Armstrong Siddeley
BTH.	Mag.	Yes.	12	Yes.	SP.	TT.	3	C.	Met.	No.	¾Fl.	Sp.	4.7	TT.	TT.	½El.	Cant.	I-Rw.	I-Rw.	WW	Disk	PG.	Armstrong Siddeley
BTH.	Mag.	Yes.	12	Yes.	MD.	TT.	3	C.	Met.	No.	¾Fl.	Sp.	3.8	TT.	TT.	½El.	Cant.	I-Rw.	§I-Rw.	WW	Disk	PG.	Armstrong Siddeley
.....	Mag.	Yes.	12	Yes.	Co.	Eng.	4	R.	Fab.	Fab.	FF.	Sp.	4.5	Sg.	Sg.	½El.	½El.	I-Rw.	I-Rw.	WW	HS.	PG.	Arrol Johnston
.....	Mag.	Yes.	12	Yes.	SP.	Sep.	4	R.	Met.	No.	¾Fl.	Sp.	4.5	TT.	TT.	½El.	½El.	I-Rw.	I-Rw.	WW	HS.	GC.	Arrol Johnston
ML.	Mag.	Yes.	12	Yes.	Co.	Sep.	3	C.	Fab.	Fab.	FF.	Sp.	4.0	RR.	TA.	T½El.	T½El.	I-Rw.	I-Rw.	WW	HS.	PG.	Ashton Evans
BLIC.	Bat.	Yes.	12	Yes.	SP.	Eng.	4	R.	Met.	No.	¾Fl.	Sp.	4.2	TT.	TT.	½El.	Cant.	I-Rw.	I-FW	SN.	HS.	PG.	Aster
Scint.	Mag.	Yes.	12	Yes.	MO.	Sep.	4	R.	Met.	No.	FF.	Sp.	4.0	TT.	TT.	½El.	½El.	I-Rw.	I-FW	Ca.	Wire	PG.	Astin Martin
.....	Mag.	Yes.	6	Ex.	SP.	Eng.	3	C.	Met.	Met.	½Fl.	Sp.	4.9	Sg.	TT.	T½El.	¼El.	I-FW	I-Rw.	WW	Wire	PG.	Austin
.....	Mag.	Yes.	6	Yes.	SP.	Eng.	4	C.	Fab.	Met.	½Fl.	Sp.	5.2	Sg.	Sg.	½El.	½El.	E-Tr.	I-Rw.	WW	HS.	PG.	Austin
.....	Mag.	Yes.	12	Yes.	SP.	Eng.	4	C.	Met.	Met.	½Fl.	Sp.	4.9	Sg.	Sg.	½El.	½El.	E-Tr.	I-Rw.	WW	HS.	PG.	Austin
Lucas.	Mag.	Ex.	6	Ex.	Co.	Eng.	3	C.	Fab.	Fab.	½Fl.	Sp.	4.5	RR.	TA.	¼El.	¼El.	I-Rw.	I-Rw.	WW	Disk	PG.	Bayliss Thomas
Lucas.	Mag.	Yes.	6	Ex.	Co.	Eng.	3	C.	Fab.	Fab.	½Fl.	Sp.	4.5	RR.	TA.	¼El.	¼El.	I-Rw.	I-Rw.	WW	Disk	PG.	Bayliss Thomas
Lucas.	Mag.	Yes.	6	Yes.	Co.	Eng.	3	C.	Fab.	Fab.	½Fl.	Sp.	4.5	TA.	TA.	¼El.	¼El.	I-Rw.	I-Rw.	WW	Disk	PG.	Bayliss Thomas
Lucas.	Mag.	Yes.	12	Yes.	Co.	Eng.	4	R.	Fab.	Fab.	½Fl.	Sp.	4.5	Sg.	Sg.	½El.	½El.	I-Rw.	I-Rw.	WW	HS.	PG.	Bayliss Thomas
Lucas.	Mag.	Yes.	12	Yes.	Co.	Sep.	4	R.	Met.	Met.	¾Fl.	Sp.	4.5	Sg.	Sg.	½El.	½El.	I-Rw.	I-Rw.	WW	HS.	PG.	Bean
ML.	Mag.	Yes.	12	Yes.	Co.	Sep.	4	R.	Met.	Met.	¾Fl.	Sp.	4.5	Sg.	Sg.	½El.	½El.	I-Rw.	§I-Rw.	SN.	HS.	PG.	Bean
ML.	Mag.	Yes.	12	Yes.	MD.	Eng.	4	R.	Met.	Met.	¾Fl.	Sp.	4.5	Sg.	Sg.	½El.	½El.	I-Rw.	I-Rw.	WW	HS.	PG.	Bean
.....	Mag.	Yes.	12	Yes.	SP.	Eng.	4	C.	Met.	Met.	.....	Sp.	4.5	Sg.	Sg.	½El.	½E	I-Rw.	I-Rw.	.....	HS.	PG.	Beardmore
CAV.	Bat.	Yes.	6	Yes.	MO.	Eng.	3	C.	Fab.	Fab.	¾Fl.	Sp.	4.3	Sg.	Sg.	½El.	½El.	I-Rw.	§I-Rw.	SN.	HS.	PG.	Belsize
CAV.	Bat.	Yes.	12	Yes.	MO.	Eng.	4	C.	Fab.	Fab.	¾Fl.	Sp.	4.3	Sg.	Sg.	½El.	½El.	I-Rw.	I-FW	SN.	HS.	PG.	Belsize
ML.	Mag.	Yes.	12	Yes.	Co.	Sep.	4	R.	Met.	Met.	FF.	Sp.	Opt.	Sg.	Sg.	½El.	½El.	I-Rw.	I-FW	WW	Wire	PG.	Bentley
Scint.	Mag.	Yes.	12	Yes.	MD.	Eng.	3	C.	Met.	No.	¾Fl.	Sp.	4.3	TT.	TT.	½El.	½El.	I-Rw.	I-FW	WW	HS.	PG.	Beverley Barnes
.....	Mag.	Yes.	12	Yes.	SP.	Eng.	3	C.	Met.	No.	½Fl.	Wo.	4.8	TT.	TT.	¼El.	¼El.	I-Rw.	I-Rw.	WS.	Disk	PG.	B. S. A.
.....	Bat.	Yes.	12	Yes.	MD.	Eng.	3	R.	Met.	No.	.....	Wo.	4.2	TT.	TT.	¼El.	¼El.	I-Rw.	I-Rw.	WW	Disk	PG.	B. S. A.
.....	Bat.	Yes.	12	Yes.	MD.	Eng.	3	R.	Met.	No.	.....	Wo.	4.2	TT.	TT.	¼El.	¼El.	I-Rw.	I-Rw.	WW	Disk	PG.	B. S. A.
Lucas.	Mag.	Yes.	12	Yes.	Co.	Sep.	3	R.	Met.	Met.	FF.	Sp.	4.0	Sg.	Sg.	½El.	½El.	I-Rw.	I-Rw.	WS.	HS.	GC.	Calcott
Lucas.	Mag.	Yes.	12	Yes.	Co.	Sep.	3	R.	Met.	Met.	FF.	Sp.	4.0	Sg.	TA.	½El.	½El.	I-Rw.	I-Rw.	WS.	HS.	GC.	Calcott
Lucas.	Mag.	Yes.	12	Yes.	Co.	Sep.	3	R.	Met.	Met.	FF.	Sp.	4.0	Sg.	TA.	½El.	½El.	I-Rw.	I-Rw.	WS.	HS.	GC.	Calcott
ML.	Mag.	Yes.	12	Yes.	SP.	Sep.	4	R.	Fab.	Fab.	½Fl.	Sp.	4.8	Sg.	Sg.	½El.	½El.	I-Rw.	I-Rw.	WS.	HS.	PG.	Calthorpe
ML.	Mag.	Yes.	12	Yes.	MD.	Eng.	4	R.	Fab.	Fab.	½Fl.	Sp.	4.8	Sg.	Sg.	½El.	½El.	I-Rw.	I-Rw.	WW	HS.	PG.	Calthorpe
Simms	Mag.	Yes.	6	Yes.	Co.	Sep.	3	R.	Fab.	Fab.	FF.	Sp.	4.5	Sg.	Sg.	½El.	½El.	I-Rw.	I-Rw.	WW	HS.	PG.	Charron Laycock
Lucas.	Mag.	Yes.	12	Yes.	Co.	Sep.	3	R.	Fab.	Fab.	FF.	St.	4.4	Sg.	Sg.	½El.	½El.	I-Rw.	I-Rw.	WS.	Disk	PG.	Cluley
Lucas.	Mag.	Yes.	12	Yes.	Co.	Sep.	4	R.	Fab.	Fab.	FF.	Sp.	4.4	Sg.	Sg.	½El.	½El.	I-Rw.	I-Rw.	WS.	Disk	PG.	Cluley
Fellow	Mag.	Yes.	6	Yes.	Co.	TT.	3	C.	Fab.	No.	½Fl.	Sp.	4.5	TT.	TT.	¼El.	¼El.	I-Rw.	I-Rw.	SN.	HS.	GC.	Clyno
Fellow	Mag.	Yes.	12	Yes.	Co.	TT.	3	C.	Fab.	No.	½Fl.	Sp.	4.5	TT.	TT.	¼El.	¼El.	I-Rw.	I-Rw.	SN.	HS.	GC.	Clyno
ML.	Mag.	Yes.	12	Yes.	SP.	Eng.	3	C.	Fab.	Fab.	½Fl.	Sp.	4.0	Sg.	Sg.	½El.	½El.	I-Tr.	I-Rw.	WW	HS.	OC.	Crossley
ML.	Mag.	Yes.	12	Yes.	Co.	Sep.	4	R.	Fab.	Fab.	.....	Sp.	3.5	Sg.	Sg.	½El.	½El.	I-Rw.	E-Tr.	WW	HS.	OC.	Crossley
ML.	Mag.	Yes.	12	Yes.	Co.	Sep.	4	R.	Met.	No.	FF.	Sp.	4.0	TT.	TT.	½El.	¾El.	I-Rw.	I-Tr.	WW	Wire	OC.	Crossley
Fellow	Mag.	Yes.	12	Yes.	Co.	Sep.	3	C.	Fab.	Fab.	FF.	St.	4.5	Sg.	Sg.	¼El.	¼El.	I-Rw.	R&P.	HS.	PG.	Crouch
.....	Bat.	Yes.	12	Yes.	Co.	Sep.	4	R.	Fab.	Fab.	FF.	Wo.	4.7	RR.	TA.	½El.	Cant.	I-Rw.	E-Tr.	WW	Disk	GC.	Cubitt
.....	Bat.	Yes.	12	Yes.	SP.	Sep.	4	C.	Met.	Met.	½Fl.	Wo.	5.1	Sg.	Sg.	½El.	½El.	E-Tr.	I-Rw.	WW	Wire	PG.	Daimler
.....	Bat.	Yes.	12	Yes.	SP.	Sep.	4	C.	Met.	Met.	½Fl.	Wo.	5.8	Sg.	Sg.	½El.	½El.	E-Tr.	I-Rw.	WW	Wire	PG.	Daimler
.....	Bat.	Yes.	12	Yes.	SP.	Sep.	4	R.	Met.	Met.	½Fl.	Wo.	5.1	Sg.	Sg.	½El.	½El.	E-Tr.	I-Rw.	WW	Wire	PG.	Daimler
.....	Bat.	Yes.	12	Yes.	SP.	Sep.	4	C.	Met.	Met.	½Fl.	Wo.	4.1	Sg.	Sg.	½El.	½El.	E-Tr.	I-Rw.	WW	Wire	PG.	Daimler
.....	Mag.	Yes.	12	Yes.	SP.	Sep.	4	R.	Met.	Met.	½Fl.	Wo.	3.6	Sg.	Sg.	½El.	½El.	E-Tr.	I-Rw.	WW	Wire	PG.	Daimler
.....	Bat.	Yes.	12	Yes.	SP.	Sep.	4	C.	Met.	Met.	½Fl.	Wo.	3.5	Sg.	Sg.	½El.	½El.	E-Tr.	I-FW	WW	Wire	PG.	Daimler
.....	Mag.	Yes.	12	Yes.	SP.	Sep.	4	R.	Met.	Met.	½Fl.	Wo.	3.3	Sg.	Sg.	½El.	½El.	E-Tr.	I-Rw.	WW	Wire	PG.	Daimler
ML.	Mag.	Yes.	12	Ex.	Co.	Sep.	3	R.	Lea.	No.	¾Fl.	Sp.	4.4	TT.	TT.	½El.	½El.	I-Rw.	I-Rw.	SN.	HS.	GC.	Day Leeds
Fellow	Mag.	Yes.	6	Yes.	Co.	Sep.	3	R.	Met.	No.	FF.	Sp.	4.5	TT.	TT.	½El.	½El.	I-Rw.	E-Rw.	SN.	HS.	GC.	Deemster
BTH.	Mag.	Yes.	6	Yes.	Co.	Sep.	3	O.	Fab.	Fab.	½Fl.	Sp.	4.2	RR.	TA.	½El.	Cant.	I-Rw.	E-Tr.	WS.	Disk	GC.	Eric Campbell
BLIC.	Mag.	Yes.	12	Yes.	Co.	Sep.	4	R.	Fab.	Fab.	FF.	Sp.	4.0	Sg.	Sg.	½El.	½El.	I-Rw.	I-Rw.	WW	Wire	AM.	Guy
Lucas.	Mag.	Yes.	12	Yes.	Co.	Eng.	4	R.	Fab.	Fab.	FF.	Sp.	4.4	Sg.	Sg.	½El.	½El.	I-Rw.	I-Rw.	WW	HS.	OC.	Guy
.....	Mag.	Yes.	6	Yes.	Fr.	.....	.....	.....	.....	.....	FF.	.....	4.2	Sg.	Sg.	¼El.	¼El.	E-Tr.	I-Rw.	Plan	Wire	PG.	G. W. K.
.....	Mag.	Yes.	6	Ex.	Co.	TT.	3	C.	.....	.....	½Fl.	Sp.	4.8	TT.	TT.	½El.	½El.	I-Rw.	I-Rw.	WW	HS.	PG.	Gwynne
BTH.	Mag.	Yes.	6	Yes.	Co.	Eng.	4	R.	Lea.	Lea.	FF.	Sp.	4.5	Sg.	Sg.	½El.	½El.	I-Rw.	I-Rw.	WS.	HS.	PG.	Hampton
.....	Mag.	Yes.	12	Yes.	Co.	Eng.	4	R.	Fab.	Fab.	FF.	Sp.	4.5	Sg.	Sg.	½El.	¾El.	I-Rw.	I-Rw.	WS.	HS.	PG.	Hampton
.....	Mag.	Yes.	6	Yes.	Co.	Eng.	3	C.	Met.	No.	½Fl.	Sp.	4.5	TT.	TT.	¼El.	¼El.	I-Rw.	I-Rw.	WW	Disk	PG.	Hands
.....	Bat.	Yes.	12	Yes.	Co.	Eng.	3	C.	Met.	No.	½Fl.	Sp.	4.7	TT.	TT.	½El.	½El.	I-Rw.	I-FW	WW	Disk	PG.	Hands
CAV.	Bat.	Yes.	6	Yes.	MD.	Sep.	4	R.	Met.	No.	FF.	Wo.	4.2	TT.	TT.	½El.	¾El.	I-Rw.	I-Rw.	SN.	Wire	PG.	H. E.
.....	Opt.	Yes.	12	Yes.	MD.	Sep.	4	R.	Met.	No.	½Fl.	Sp.	4.2	TT.	TT.	½El.	¾El.	I-Rw.	I-FW	SN.	Wire	PG.	H. E.
ML.	Mag.	Yes.	12	Yes.	SP.	Sep.	3	R.	Met.	Met.	FF.	Sp.	.....	Sg.	Sg.	½El.	½El.	I-Rw.	I-Rw.	WS.	Disk	PG.	Hillman
Fellow	Mag.	Yes.	.....	Yes.	Co.	Sep.	3	R.	Fab.	Fab.	½Fl.	Sp.	4.4	Sg.	TA.	¼El.	¼El.	I-Rw.	I-Rw.	WW	HS.	PG.	Hodgson
ML.	Mag.	Yes.	12	Yes.	Sp.	RA.	3	R.	Fab.	No.	½Fl.	Sp.	4.3	TT.	TT.	Cant.	Cant.	I-Rw.	E-Rw.	Bev.	Disk	OC.	Horstman
Lucas.	Mag.	Yes.	12	Yes.	Co.	Eng.	3	R.	Fab.	Fab.	½Fl.	Sp.	4.9	Sg.	Sg.	¼El.	½El.	E-Rw.	E-Tr.	WW	HS.	PG.	Humber
Lucas.	Mag.	Yes.	12	Yes.	Co.	Eng.	4	R.	Lea.	Met.	½Fl.	Sp.	4.3	Sg.	Sg.	½El.	½El.	E-Rw.	E-Tr.	WW	HS.	PG.	Humber
Lucas.	Mag.	Yes.	12	Yes.	Co.	Sep.	4	R.	Fab.	Met.	½Fl.	Sp.	4.3	Sg.	Sg.	½El.	½El.	I-Rw.	E-Tr.	WW	HS.	PG.	Humber
Brolt.	Bat.	Yes.	6	Ex.	Co.	Eng.	3	R.	Fab.	Fab.	½Fl.	Sp.	4.5	Sg.	Sg.	½El.	½El.	E-Rw.	E-Tr.	R&P.	HS.	PG.	Jowett
.....	Mag.	Yes.	6	Yes.	Co.	Eng.	3	C.	Fab.	No.	½Fl.	Sp.	.....	TT.	TT.	T½El.	¼El.	I-Rw.	I-Rw.	WS.	HS.	GC.	Lagonda
Wafld.	Mag.	Yes.	12	Yes.	SP.	Eng.	4	R.	Met.	Met.	FF.	Wo.	4.3	TT.	TT.	½El.	Cant.	I-Rw.	I-Fw.	SN.	Disk	PG.	Lanchester
.....	B&M.	Yes.	12	Yes.	SP.	Eng.	3	R.	Met.	Met.	FF.	Wo.	Var.	TT.	TT.	½El.	Cant.	I-Tr.	I-Rw.	SN.	Wire	PG.	Lanchester

Man—Integral intake and exhaust manifold
MD—Multi Dry Plate
Met—Metallic
MO—Multi Plates in Oil
NM—Non-Metallic
O—
Opt— } Optional
OC—Oil Cups
OH—Overhead
PG—Pressure Gun
Plan—Planetary
Pla—Planetary
Pr Cs—Pressure to crankshaft bearings and big ends through hollow crankshaft
Pres—Pressure
R—Right Hand
RA—Unit with Rear Axle
R&P—Rack and Pinion
RR—Radius Rods
S—Sleeve Type
Scint—Scintilla
Sep—Cast Separately
Sep—Separate Unit
Sg—Springs
SN—Screw and Nut
SO—Single Plate in Oil
Sp—Spiral Bevel
SP—Single Dry Plate
Splash—Pump and Troughs
SpPr—Pressure to main bearings only, splash to other parts
St—Steel
St—Straight Bevel
T—Valves opposite
TA—Torque Arm
Ther—Thermostatic Valve
ThS—Thermo Siphon
T&S—Thermostat and Shutters
TT—Unit with Torque Tube
Vacu—Vacuum
Wat—Water
Watfd—Watford
W&E—Water and Exhaust
Wo—Worm
WS—Worm and Segment
WW—Worm and Worm Wheel

British Passenger Car

MAKE	GENERAL				ENGINE																			
													Camshaft			Cooling				Fuel System		
	H.P.	Wheelbase (Inches)	Track (Inches)	Tire Size (Inches)	Number of Cylinders	Bore & Stroke (Inches)	Piston Displacement (Cu. In.)	Number of Point Susp.	Cylinder Head	Valve Location	Cylinders Cast	Cylinders Integ'd With Crankcase	Piston Material	Location	Drive	Gear Material	Medium	Temperature Control	Water Circulation	Oiling System	Carburetor Make	Mixture Heating	Feed
Lea-Francis	10	96	46	26x3	4	2.5x3.9	75	4	Det.	I.	4	Int.	Ci.	CC.	Heli.	Br.	Wat.	None.	ThS.	Splash.	Zenith	Wat.	Grav.
Lewis	10	98	44	26x3	2	3.2x4.1	66	4	Int.	F.	1	Sep.	Ci.	CC.	Spur.	St.	Air.	None.	None	Splash.	Cox		Grav.
Magnetic	16	123	56	32x4½	4	3.1x5.1	161	3	Det.	S.	4	Sep.	Al.	CC.	Chain.	St.	Wat.	None.	Pump.	PrCs.	SU	Exh.	Vacu.
Maudslay	16	123	53	32x4½	6	2.5x3.9	120	3	Det.	I.	6	Int.	Al.	OH.	Eccen.	No.	Wat.	Ther.	Pump.	Splash.	Solex	Wat.	Vacu.
McKenzie	9	99	46	26x3	4	2.3x3.7	65	4	Det.	I.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	ThS.	PrCs.			Grav.
McKenzie	11	102	48	28x3½	4	2.5x4.3	91	4	Int.	L.	4	Sep.	Ci.	CC.	Chain.	No.	Wat.	None.	ThS.	PrCs.		Man.	Grav.
Meteorite	12	106	50	28x3½	4	2.7x4.3	100	4	Int.	L.	4	Sep.	Ci.	CC.	Chain.	No.	Wat.	None.	ThS.	PrCs.	Zenith	Man.	Grav.
Meteorite	14	118	50	30x3½	6	2.4x3.9	106	4	Det.	I.	6	Int.	Ci.	CC.	Heli.	St.	Wat.	None.	Pump.	SpPr.	Zenith	Man.	Grav.
Morris Cowley	12	102	48	28x3½	4	2.7x4.0	94	4	Det.	L.	4	Int.	Ci.	CC.	Heli.	Br.	Wat.	None.	ThS.	SpPr.	Zenith	Wat.	Grav.
Morris Oxford	14	102	48	28x3½	4	2.9x4.0	109	4	Det.	L.	4	Int.	Al.	CC.	Heli.	Br.	Wat.	None.	ThS.	SpPr.	Smith	Wat.	Grav.
Napier	40	137	56	36x5	6	4.0x5.0	376	4	Det.	I.	6	Int.	Al.	OH.	Worm.	Br.	Wat.	Ther.	Pump.	PrCs.	SU	Wat.	Pres.
N. P.	14	114	52	30x4	4	2.9x4.7	129	4	Det.	I.	4	Sep.	Ci.	CC.	Heli.	St.	Wat.	None.	ThS.	PrCs.	Zenith	Man.	Grav.
Orpington	10*	96	50	28x3½	4	2.9x4.3	91	4	Int.	L.	4	Sep.	Ci.	CC.	Chain.	No.	Wat.	None.	ThS.	PrCs.	Zenith	Man.	Grav.
Palladium	12	111	48	30x3½	4	2.7x3.9	91	3	Det.	L.	4	Int.	Al.	CC.	Heli.	Br.	Wat.	None.	ThS.	SpPr.	Claudel	Man.	Grav.
Paydell	14	114	50	32x3½	4	2.9x4.7	129	4	Det.	I.	4	Int.	Al.	CC.	Heli.	St.	Wat.	None.	ThS.	PrCs.	Zenith		Grav.
Phoenix	12	108	49	30x3½	4	2.7x4.7	109	4	Det.	I.	4	Int.	Ci.	CC.	Heli.	St.	Wat.	None.	ThS.	PrCs.	Zenith	Wat.	Grav.
Phoenix	18	126	56	32x4	4	3.3x5.3	186	3	Det.	I.	4	Int.	Ci.	OH.	Bevel.	St.	Wat.	None.	Pump.	SpPr.	Zenith	Wat.	Vacu.
Rhode	9	102	46	26x3	4	2.4x3.5	66	3	Det.	I.	4	Sep.	Ci.	OH.	Bevel.	St.	Wat.	None.	ThS.	Splash.	Cox	Man.	Grav.
Rhode	11	102	46	28x3½	4	2.5x3.5	75	3	Det.	I.	4	Sep.	Ci.	OH.	Bevel.	St.	Wat.	None.	ThS.	Splash.	Cox	Man.	Grav.
Riley	11	114	50	30x3½	4	2.5x4.3	91	4	Det.	L.	4	Sep.	Al.	CC.	Chain.	Ci.	Wat.	None.	ThS.	SpPr.	Cox		Grav.
Rob Roy	8	102	48	26x3	2	3.3x3.5	62	3	Int.	L.	1	Sep.	Al.	CC.	Spur.	NM.	Wat.	None.	ThS.	Splash.	Zenith		Grav.
Rob Roy	12	115	48	28x3½	4	2.7x3.9	90	3	Det.	L.	4	Sep.	Ci.	CC.	Spur.	St.	Wat.	None.	ThS.	SpPr.	Zenith	Wat.	Grav.
Rolls Royce	20	129	54	32x4½	6	3 x4.5	192	3	Det.	I.	6	Sep.	Al.	CC.	Heli.		Wat.	Ther.	Pump.	PrCs.	Own	Man.	Vacu.
Rolls Royce	40	144	56	33x5	6	4.5x4.7	452	3	Int.	L.	3	Sep.	Al.	CC.	Heli.		Wat.	Ther.	Pump.	FlPr	Own	Wat.	Pres.
Rover	8	94	50	26x3	2	3.3x3.9	69	3	Det.	L.	1	Sep.	Ci.	CC.	Spur.	St.	Air.	None.	None	Splash.	Smith	Man.	Grav.
Rover	14	116	50	32x4	4	2.9x5.1	140	4	Det.	L.	4	Sep.	Ci.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.	SU	Wat.	Vacu.
Rover	21	138	56	32x4½	6	2.9x5.1	209	4	Det.	L.	6	Sep.	Ci.	CC.	Chain.	No.	Wat.	Ther.	Pump.	PrCs.	SU	Wat.	Vacu.
Ruston Hornsby	16	117	56	32x4	4	3.1x5.1	159	4	Int.	L.	4	Sep.	Ci.	CC.	Heli.	Ci.	Wat.	None.	Pump.	PrCs.	Zenith		Grav.
Ruston Hornsby	20	126	56	32x4½	4	3.5x5.1	202	4	Int.	L.	4	Sep.	Ci.	CC.	Heli.	Ci.	Wat.	None.	Pump.	PrCs.	Zenith		Grav.
Seabrook	9	102	48	26x3	4	2.5x3.9	75	4	Det.	I.	4	Int.	Ci.	CC.	Heli.	St.	Wat.	None.	ThS.	SpPr.	Zenith		Grav.
Seabrook	12	105	48	26x3	4	2.7x3.9	91	4	Det.	I.	4	Int.	Ci.	CC.	Heli.	St.	Wat.	None.	ThS.	SpPr.	Zenith		Grav.
Singer	10	96	46	26x3	4	2.5x3.4	66	3	Det.	I.	4	Int.	Ci.	CC.	Spur.	Ci.	Wat.	None.	ThS.	Splash.	Solex	Wat.	Grav.
Singer	15	117	52	30x4	6	2.5x3.9	120	4	Det.	L.	4	Sep.	Ci.	CC.	Chain.	No.	Wat.	None.	ThS.	Splash.	Solex	Wat.	Vacu.
Sizaire Berwick	13	112	52	30x4	4	2.8x4.0	101	3	Det.	L.	4	Sep.	Al.	CC.	Chain.	St.	Wat.	None.	Pump.	PrCs.	Zenith	Wat.	Vacu.
Sizaire Berwick	23	130	55	32x4½	4	3.7x5.0	220	3	Det.	L.	4	Sep.	Al.	CC.	Chain.	St.	Wat.	None.	Pump.	PrCs.	Zenith	Wat.	Vacu.
Star	12	112	52	30x4	4	2.7x4.7	118	4	Det.	L.	4	Sep.	Ci.	CC.	Heli.	NM.	Wat.	None.	ThS.	SpPr.	Zenith	Wat.	Grav.
Star	18	126	52	32x4½	6	2.7x4.7	177	4	Det.	L.	4	Sep.	Ci.	CC.	Heli.	NM.	Wat.	None.	Pump.	SpPr.	Zenith	Wat.	Vacu.
Stoneleigh	9	96	48	28x3	2	3.3x3.4	61	4	Int.	I.	1	Sep.	Al.	CC.	Spur.	Ci.	Air.	None.	None	PrCs.	Claudel.	Exh.	Grav.
Straker Squire	10	108	46	30x3½	4	2.5x4.3	89	4	Det.	I.	4	Int.	Al.	CC.	Chain.	No.	Wat.	None.	ThS.	SpPr.	Solex	Wat.	Grav.
Straker Squire	24	127	56	32x5	6	3.1x5.1	239	4	Int.	I.	1	Sep.	Ci.	OH.	Bevel.	St.	Wat.	T&S.	Pump.	PrCs.	SU	Wat.	Vacu.
Standard	11	105	51	28x3½	4	2.7x3.5	79	3	Det.	I.	4	Int.	Al.	CC.	Chain.	No.	Wat.	None.	ThS.	Splash.	Zenith	Man.	Grav.
Standard	14	116	54	30x4	4	2.9x4.3	118	4	Det.	I.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	ThS.	PrCs.	Zenith	Wat.	Vacu.
Sunbeam	12	115	54	30x4	4	2.7x4.3	97	4	Det.	I.	4	Int.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.	Claudel.	Wat.	Vacu.
Sunbeam	14	118	54	32x4	4	2.8x4.7	119	4	Det.	I.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	Ncne.	Pump.	PrCs.	Claudel.	Wat.	Vacu.
Sunbeam	16	127	57	32x4½	6	2.7x4.3	154	3	Det.	I.	6	Int.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.	Claudel.	Wat.	Vacu.
Sunbeam	20	138	57	32x4½	6	2.9x4.7	193	3	Det.	I.	6	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.	Claudel.	Wat.	Vacu.
Sunbeam	24	144	57	36x5	6	3.1x5.9	276	4	Det.	I.	6	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	PrCs.	Claudel.	Wat.	Vacu.
Swift	10	90	46	26x3	4	2.3x3.8	67	4	Det.	L.	4	Int.	Ci.	CC.	Heli.	Ci.	Wat.	None.	ThS.	PrCs.	Solex	Wat.	Grav.
Swift	12	108	48	30x3½	4	2.7x5.1	118	4	Int.	L.	4	Sep.	Ci.	CC.	Chain.	No.	Wat.	None.	ThS.	PrCs.	Zenith	Wat.	Grav.
Talbot	8	97	47	26x3	4	2.2x3.7	59	4	Det.	I.	4	Int.	Al.	CC.	Heli.	St.	Wat.	None.	Pump.	PrCs.	Zenith	Man.	Grav.
Talbot	10	108	47	28x3½	4	2.3x3.7	65	4	Det.	I.	4	Int.	Al.	CC.	Heli.	St.	Wat.	None.	Pump.	PrCs.	Zenith	Man.	Grav.
Talbot	12	120	52	30x4	6	2.3x3.7	97	4	Det.	I.	4	Int.	Al.	CC.	Heli.	St.	Wat.	None.	Pump.	PrCs.	Zenith	Wat.	Vacu.
Trojan	10	96	48	28x2	4	2.5x4.7	92	3	Int.		2	Int.	Ci.				Wat.	None.	ThS.		Own	Man.	Grav.
Turner	12	108	48	28x3½	4	2.7x3.9	91	3	Det.	L.	4	Sep.	Ci.	CC.	Heli.	St.	Wat.	None.	ThS.	Splash.	Zenith	Man.	Grav.
Turner	14	120	56	32x4	4	3.0x5.0	140	4	Det.	L.	4	Sep.	Ci.	CC.	Heli.	St.	Wat.	None.	ThS.	PrCs.	Zenith	Wat.	Vacu.
Vauxhall	14	114	50	32x4	4	2.9x5.1	140	3	Det.	L.	4	Sep.	Al.	CC.	Spur.	NM.	Wat.	None.	Pump.	PrCs.	Zenith	Exh.	Vacu.
Vauxhall	23	130	56	34x4½	4	3.7x5.5	242	4	Det.	I.	4	Sep.	Ci.	CC.	Chain.	No.	Wat.	Ther.	Pump.	PrCs.	Zenith	W&E.	Vacu.
Vauxhall	30	130	54	34x4½	4	3 8x5 5	259	4	Det.	I.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	Ther.	Pump.	PrCs.	Zenith	Wat.	Vacu.
Vulcan	12	114	56	30x3½	4	2 7x4 7	109	3	Det.	I.	4	Int.	Ci.	CC.	Chain.	No.	Wat.	None.	Pump.	Splash.	Zenith	Exh.	Grav.
Vulcan	20	123	56	32x4½	4	3.7x5.1	224	4	Int.	L.	4	Sep.	Ci.	CC.	Heli.	NM.	Wat.	None.	Pump.	PrCs.	Zenith	Exh.	Vacu.
Waverley	12	108	50	30x4	4	2.7x4.0	91	4	Det.	S.	4	Int.	Ci.	CC.	Heli.	Br.	Wat.	None.	ThS.	SpPr.	Zenith	Wat.	Grav.
Waverley	15	120	50	30x4	4	3.0x5.0	141	4	Det.	L.	4	Int.	Al.	CC.	Heli.	Ci.	Wat.	None.	ThS.	PrCs.	Zenith	Wat.	Grav.
Westwood	14	110	49	30x3½	4	2.9x4.7	129	3	Det.	I.	4	Sep.	Ci.	CC.	Heli.	Br.	Wat.	None.	ThS.	PrCs.	Zenith	Wat.	Vacu.
Whitlock	12	114	50	28x3½	4	2.7x3.9	91	3	Det.	L.	4	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	ThS.	PrCs.	Zenith	Man.	Grav.
Whitlock	14	126	50	30x4	6	2.4x3.9	106	4	Det.	I.	4	Int.	Ci.	CC.	Heli.		Wat.	None.	Pump.	Splash.	Zenith	Exh.	Grav.
Wolseley	7	97	44	26x3	2	3.2x3.6	59	3	Det.	L.	1	Sep.	Al.	CC.	Spur.		Wat.	None.	ThS.	Splash.	SU	Man.	Grav.
Wolseley	10	99	46	28x3½	4	2.5x3.7	77	4	Det.	I.	4	Int.	Al.	OH.	Chain.	No.	Wat.	None.	ThS.	SpPr.	SU	Exh.	Grav.
Wolseley	14	.....	52	32x4	4	3.1x5.1	159	4	Int.	L.	2	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	Splash.	SU	Man.	Grav.
Wolseley	15	.....	56	32x4½	4	3.1x5.1	159	4	Det.	I.	4	Sep.	Al.	OH.	Chain.	No.	Wat.	Ther.	Pump.	SpPr.	SU	Exh.	Vacu.
Wolseley	20	137	54	32x4½	6	3.1x5.1	239	4	Int.	L.	2	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	Splash.	SU	Wat.	Vacu.
Wolseley	24	140	55	36x5	6	3.5x5.5	326	4	Int.	L.	2	Sep.	Al.	CC.	Chain.	No.	Wat.	None.	Pump.	Splash.	SU	Wat.	Vacu.

ABREVIATIONS—

†—Magneto Optional
‡—Battery Optional
§—Four wheel brakes optional
Al—Aluminum
AM—Automatic from central point
B&M—Battery and Magneto
Bat—Battery
Bev—Bevel
Bevel—Spiral Bevel
Br—Bronze
C—Central
Ca—Cam
Cant—Cantilever
CC—In Crankcase
CI—Cast Iron
Co—Cone
Det—Detachable
Eccen—Eccentric Rods
½ El—Half Elliptic
¼ El—Quarter Elliptic
¾ El—Three Quarter Elliptic
T ½ El—Transverse Half Elliptic
Eng—Unit with engine
ERwExternal Rear Wheels
ETr—External Transmission
Exh—Exhaust
F—Valves in head and side
Fab—Fabric
FF—Full Floating
½ Fl—Semi Floating
¾ Fl—Fl—Three Quarter Floating
FlPr—Pressure to all bearings including wrist pins
FR—Friction Drive
GC—Grease Cups
Grav—Gravity
Heli—Helical Gears
HS—Hollow Pressed Steel
I—Valves in head
IFw—Internal Front Wheels
Int—Integral
IRw—Internal Rear Wheels
ITrInternal Transmission
L—Valves at side
Lea—Leather
Mag—Magneto
Mag—Magnetic Transmission

Chassis Specifications—Continued

ELECTRICAL SYSTEM					TRANSMISSION						REAR AXLE					RUNNING GEAR							MAKE
Ignition						Gearset			Universals							Springs		Brakes					
Make	Type	Equipped With Generator	Voltage	Equipped With Starter	Clutch Type	Location	Number of Speeds	Lever	Front	Rear	Type	Final Drive	Gear Ratio	Propulsion Taken By	Torque Taken By	Front	Rear	Hand	Foot	Steering Type	Wheels Type	Chassis Lubrication	
BLIC..	Mag..	Yes...	6	Yes...	Co....	Eng..	3	R...	Fab..	Fab..	½Fl....	Sp....	4.7	Sg....	TA...	½El..	¼El..	I-Tr...	I-Rw...	WW....	Disk....	GC....	Lea-Francis
CAV..	Mag..	Yes...	6	No...	SP....	Sep..	3	C...	Fab..	Fab..	½Fl....	Sp....	4.2	Sg....	Sg....	¼El..	¼El..	I-Rw...	I-Rw...	WW....	Disk....	GC....	Lewis
BTH..	Mag..	Yes...	18	Yes...	Mag..				Fab..	Fab..	FF.....	Sp....	4.0	Sg....	Sg....	½El..	½El..	I-Rw...	I-Rw...	WW....	Disk....	PG....	Magnetic
Delco.	Bat...	Yes...	12	Yes...	SP....	Eng..	4	R...	Met..	No..	FF.....	Sp....		TT..	TT..	½El..	½El..	I-Rw...	I-Fw...	WW....	Wire....	PG....	Maudslay
.....	Mag..	Yes...	6	Ex...	Co....	Eng..	3	C...	Fab..	Fab..	½Fl....	Sp....	4.5	Sg....	TA...	¼El..	¼El..	I-Rw...	I-Rw...	WW....	Disk....	GC....	McKenzie
BLIC..	Mag..	Yes...	12	Yes...	Co....	Eng..	4	R...	Fab..	Fab..	½Fl....	Sp....	4.6	Sg....	Sg....	½El..	½El..	I-Rw...	I-Rw...	WW....	HS....	GC....	McKenzie
BTH..	Mag..	Yes...	6	Yes...	Co....	Sep..	3	R...	Met..	No..	FF.....	St....	4.5	TT..	TT..	½El..	Cant..	I-Rw...	I-Rw...	WW....	HS....	PG....	Meteorite
BTH..	Mag..	Yes...	12	Yes...	Co....	Sep..	3	R...	Met..	No..	FF.....	St....	4.0	TT..	TT..	½El..	Cant..	I-Rw...	I-Rw...	WW....	HS....	PG....	Meteorite
Lucas.	Mag..	Yes...	12	Yes...	SP....	Eng..	3	C...	Met..	No..	½Fl....	Sp....	4.4	TT..	TT..	½El..	¾El..	I-Rw...	I-Rw...	WW....	HS....	PG....	Morris Cowley
Lucas.	Mag..	Yes...	12	Yes...	SP....	Eng..	3	C...	Met..	No..	½Fl....	Sp....	4.4	TT..	TT..	½El..	¾El..	I-Rw...	I-Rw...	WW....	HS....	PG....	Morris Oxford
.....	B&M.	Yes...	12	Yes...	SP....	Sep..	4	C...	Met..	No..	¾Fl....	Sp....	3.3	TT..	TT..	½El..	Cant..	I-Rw...	E-Tr...	WS.....	Wire....	GC....	Napier
.....	Opt...	Yes...	12	Yes...	Co....	Eng..	4	O...	Fab..	Fab..	½Fl....	Sp....	4.5	Sg....	TA...	½El..	Cant..	I-Rw...	I-Rw...	WS.....	HS....	PG....	N. P.
.....	Mag..	Yes...	6	Ex....	Co....	Sep..	3	R...	Fab..	No..	½Fl....	Sp....	4.2	Sg....	TT..	½El..	¼El..	I-Rw...	E-Tr...	WS.....	HS....	GC....	Orpington
Fellow	Mag..	Yes...	12	Yes...	SP....	Eng..	4	R...	Fab..	Fab..	½Fl....	Sp....	4.9	Sg....	Sg....	½El..	½El..	I-Rw...	I-Fw...	WW....	Disk....	PG....	Palladium
BLIC..	Mag..	Yes...	12	Yes...	Co....	Eng..	4	R...	Met..	No..	½Fl....	Sp....	4.3	TT..	TT..	½El..	Cant..	I-Rw...	I-Fw...	SN....	Disk....	PG....	Paydell
BLIC..	Mag..	Yes...	12	Yes...	Co....	Eng..	4	R...	Met..	Fab..	½Fl....	Sp....	4.3	Sg....	Sg....	½El..	½El..	I-Rw...	I-Rw...	WW....	Wood....	PG....	Phoenix
BLIC..	Mag..	Yes...	12	Yes...	Co....	Eng..	3	C...	Met..	No..	FF.....	Sp....	4.2	TT..	TT..	½El..	Cant..	I-Rw...	I-Rw...	WW....	Wood....	PG....	Phoenix
Fellow	Mag..	Yes...	6	Ex....	SO....	Eng..	3	C...	Fab..	No..	½Fl....	Sp....	4.5	Sg....	TT..	¼El..	¼El..	E-Tr...	I-Rw...	Pla.....	Disk....	PG....	Rhode
Fellow	Mag..	Yes...	6	Yes...	SO....	Eng..	3	C...	Fab..	No..	½Fl....	Sp....	4.5	Sg....	TT..	¼El..	¼El..	E-Tr...	I-Rw...	Pla.....	Disk....	PG....	Rhode
Ml...	Mag..	Yes...	12	Yes...	Co....	Sep..	4	O...	Fab..	Fab..	½Fl....	Sp....	4.7	Sg....	Sg....	½El..	½El..	I-Rw...	I-Rw...	WW....	Disk....	PG....	Riley
Fellow	Mag..	Yes...	6	Ex....	Co....	Eng..	3	O...	Fab..	Fab..	¾Fl....	Sp....	4.3	Sg....	TA...	¼El..	¼El..	I-Rw...	I-Rw...	Pla.....	Disk....	GC....	Rob Roy
BTH..	Mag..	Yes...	12	Yes...	Co....	Eng..	4	C...	Fab..	Fab..	½Fl....	Sp....	4.5	Sg....	TA...	¼El..	¼El..	I-Rw...	I-Rw...	Pla.....	Disk....	GC....	Rob Roy
Own..	Bat...	Yes...	12	Yes...	SP....	Eng..	3	C...	Met..	No..	FF.....	Sp....	4.6	TT..	TT..	½El..	½El..	I-Rw...	I-Rw...	SN....	Wire....	PG....	Rolls Royce
Own..	B&M.	Yes...	12	Yes...	Co....	Sep..	4	R...	Met..	No..	FF.....	Sp....	3.4	TT..	TT..	½El..	Cant..	I-Rw...	I-Rw...	SN....	Wire....	PG....	Rolls Royce
.....	Mag..	Yes...	6	Ex....	SP....	Eng..	3	C...	Fab..	Met..	¾Fl....	Wo....	4.8	Sg....	TA...	¼El..	¼El..	I-Rw...	R&P...	Disk....	GC....	PG....	Rover
Lucas.	Mag..	Yes...	12	Yes...	SP....	Sep..	4	R...	Met..	Met..	½Fl....	Wo....	4.4	Sg....	TA...	½El..	½El..	I-Rw...	I-Tr...	WS.....	HS....	PG....	Rover
Delco.	Bat...	Yes...	12	Yes...	MO....	Sep..	4	R...	Met..	Met..	FF.....	Wo....	4.4	Sg....	TA...	½El..	½El..	I-Rw...	I-Fw...	WS.....	HS....	PG....	Rover
BTH..	Mag..	Yes...	12	Yes...	Co....	Eng..	3	C...	Fab..	Met..	½Fl....	Sp....	4.5	Sg....	Sg....	½El..	½El..	I-Rw...	I-Rw...	WW....	HS....	PG....	Ruston Hornsby
BTH..	Mag..	Yes...	12	Yes...	Co....	Eng..	3	C...	Fab..	Met..	½Fl....	Sp....	4.5	Sg....	Sg....	½El..	½El..	I-Rw...	I-Rw...	WW....	HS....	PG....	Ruston Hornsby
BTH..	Mag..	Yes...	6	Yes...	Co....	Eng..	3	R...	Met..	No..	½Fl....	Sp....	3.5	TT..	TT..	½El..	Cant..	I-Rw...	I-Rw...	WW....	Disk....	PG....	Seabrook
BTH..	Mag..	Yes...	6	Yes...	Co....	Eng..	3	R...	Met..	No..	½Fl....	Sp....	3.5	TT..	TT..	½El..	Cant..	I-Rw...	I-Rw...	WW....	Disk....	PG....	Seabrook
Ml...	Mag..	Yes...	6	Yes...	Co....	Eng..	3	C...	Lea..	Lea..	½Fl....	Sp....	4.5	Sg....	TA...	½El..	¼El..	I-Rw...	I-Rw...	Pla.....	Disk....	PG....	Singer
Connor	Mag..	Yes...	12	Yes...	SP....	TT..	3	R...	Met..	No..	¾Fl....	Sp....	5.0	TT..	TT..	½El..	Cant..	I-Rw...	I-Rw...	SN....	Disk....	PG....	Singer
Fellow	Mag..	Yes...	6	Yes...	SP....	Eng..	4	C...	Fab..	Met..	½Fl....	Sp....	5.2	Sg....	Sg....	½El..	½El..	E-Rw...	Ex-Tr...	WW....	HS....	PG....	Sizaire Berwick
Fellow	Mag..	Yes...	12	Yes...	SP....	Eng..	4	C...	Met..	Met..	½Fl....	Sp....	4.9	Sg....	Sg....	½El..	½El..	E-Tr...	I-Rw...	WW....	HS....	PG....	Sizaire Berwick
Watfd.	Mag..	Yes...	12	Yes...	SP....	Eng..	3	C...	Fab..	Fab..	½Fl....	Sp....	4.3	Sg....	Sg....	½El..	½El..	E-Rw...	I-Rw...	WW....	HS....	PG....	Star
Bosch.	Mag..	Yes...	12	Yes...	SP....	Eng..	4	C...	Fab..	Fab..	½Fl....	Sp....	3.9	Sg....	Sg....	½El..	½El..	E-Rw...	I-Rw...	WW....	HS....	PG....	Star
Remy.	Bat...	Yes...	6	Yes...	SP....	TT..	3	C...	.....	.....	½Fl....	Sp....	5.0	TT..	TT..	¼El..	¼El..	I-Rw...	I-Rw...	WS.....	Disk....	PG....	Stoneleigh
ML..	Mag..	Yes...	12	Ex....	Co....	Eng..	4	R...	Fab..	Fab..	FF.....	Sp....	4.0	Sg....	TA...	½El..	½El..	I-Rw...	I-Rw...	WW....	HS....	PG....	Straker Squire
Watfd.	Mag..	Yes...	12	Yes...	SP....	Sep..	4	R...	Met..	No..	FF.....	Sp....	3.8	TT..	TT..	½El..	Cant..	I-Rw...	I-Rw...	WW....	Wire....	GC....	Straker Squire
Watfd.	Mag..	Yes...	12	Yes...	MO....	TT..	3	R...	Fab..	No..	¾Fl....	Wo....	4.6	TT..	TT..	½El..	¼El..	I-Rw...	I-Rw...	WW....	HS....	PG....	Standard
Watfd.	Mag..	Yes...	12	Yes...	MO....	Sep..	4	R...	Fab..	Fab..	¾Fl....	Wo....	4.6	Sg....	Sg....	½El..	½El..	I-Rw...	E-Tr...	WW....	HS....	PG....	Standard
BTH..	Mag..	Yes...	12	Yes...	SP....	Eng..	3	R...	Met..	No..	½Fl....	Sp....	4.9	TT..	TT..	½El..	Cant..	I-Rw...	I-Fw...	WS.....	HS....	PG....	Sunbeam
BTH..	Mag..	Yes...	12	Yes...	SP....	Eng..	3	R...	Met..	No..	½Fl....	Sp....	4.5	TT..	TT..	½El..	Cant..	I-Rw...	I-Fw...	WS.....	HS....	PG....	Sunbeam
Scint..	Mag..	Yes...	12	Yes...	SP....	Eng..	3	R...	Met..	No..	½Fl....	Sp....	4.5	TT..	TT..	½El..	Cant..	I-Rw...	I-Fw...	WS.....	HS....	PG....	Sunbeam
Scint..	Mag..	Yes...	12	Yes...	SP....	Eng..	4	R...	Met..	No..	½Fl....	Sp....	4.5	TT..	TT..	½El..	Cant..	I-Rw...	I-Fw...	WS.....	HS....	PG....	Sunbeam
BTH..	Mag..	Yes...	12	Yes...	Co....	Sep..	4	R...	Met..	Met..	FF.....	Sp....	4.0	Sg....	Sg....	½El..	½El..	I-Rw...	I-Fw...	WS.....	HS....	PG....	Sunbeam
Delco.	Bat...	Yes...	6	Yes...	Co....	Sep..	3	C...	Fab..	Met..	¾Fl....	Sp....	4.6	Sg....	TA...	¼El..	¼El..	I-Rw...	I-Rw...	Bev....	Disk....	PG....	Swift
Watfd.	Mag..	Yes...	12	Yes...	Co....	Sep..	4	R...	Met..	Met..	½Fl....	Sp....	4.6	Sg....	TA...	½El..	½El..	I-Rw...	E-Tr...	WS.....	HS....	PG....	Swift
Remy†	Bat...	Yes...	6	Yes...	SP....	Eng..	3	C...	Met..	No..	½Fl....	Sp....	4.5	TT..	TT..	¼El..	¼El..	I-Rw...	I-Rw...	SN....	HS....	GC....	Talbot
Remy†	Bat...	Yes...	6	Yes...	SP....	Eng..	3	C...	Met..	No..	½Fl....	Sp....	5.1	TT..	TT..	¼El..	¼El..	I-Rw...	I-Rw...	SN....	HS....	GC....	Talbot
Remy†	Bat...	Yes...	6	Yes...	SP....	Eng..	3	C...	Met..	No..	½Fl....	Sp....	5.1	TT..	TT..	½El..	Cant..	I Rw...	I-Rw...	SN....	HS....	PG....	Talbot
.....	Bat...	Yes...	6	No...	Plan..	Sep..	2	R...	.....	.....	.....	Ch....	.....	Sg....	Sg....	Cant..	Cant..	E-Tr...	I-Rw...	Pla.....	Disk....	GC....	Trojan
BTH..	Mag..	Yes...	12	Yes...	Co....	Eng..	3	O...	Fab..	Fab..	½Fl....	Sp....	4.3	RR..	TA...	½El..	¼El..	I-Rw...	I-Rw...	Ca.....	HS....	PG....	Turner
Lucas.	Mag..	Yes...	12	Yes...	Co....	Sep..	4	R...	Fab..	.....	FF.....	Wo....	4.8	TT..	TT..	½El..	Cant..	I-Rw...	I-Rw...	Ca.....	HS....	PG....	Turner
BLIC..	Mag..	Yes...	12	Yes...	SP....	Eng..	3	R...	Met..	No..	½Fl....	Sp....	4.5	Sg....	TT..	½El..	Cant..	I-Rw...	I-Rw...	WS.....	Disk....	PG....	Vauxhall
Watfd.	Mag..	Yes...	12	Yes...	MD....	Sep..	4	R...	Met..	Met..	½Fl....	Sp....	3.6	Sg....	TA...	½El..	½El..	I-Rw...	I-Tr...	WW....	Wire....	PG....	Vauxhall
Watfd.	Mag..	Yes...	12	Yes...	MD....	Sep..	4	R...	Met..	Met..	½Fl....	Sp....	3.3	Sg....	TA...	½El..	½El..	I-Fw...	I-Tr...	WW....	Wire....	PG....	Vauxhall
.....	Mag..	Yes...	12	Yes...	Co....	Eng..	4	C...	Fab..	Fab..	¾Fl....	Wo....	4.6	Sg....	Sg....	½El..	½El..	I-Rw...	I-Rw...	WS.....	HS....	PG....	Vulcan
.....	Mag..	Yes...	12	Yes...	Co....	Sep..	4	R...	Met..	Met..	FF.....	Wo....	4.0	Sg....	Sg....	½El..	½El..	I-Rw...	E-Tr...	WW....	HS....	FG....	Vulcan
Fellow	Mag..	Yes...	12	Yes...	Co....	Sep..	4	R...	Fab..	Fab..	½Fl....	Sp....	5.2	Sg....	Sg....	½El..	¼El..	I-Rw...	I-Fw...	WS.....	Disk....	PG....	Waverley
Fellow	Mag..	Yes...	12	Yes...	Co....	Sep..	4	R...	Fab..	Fab..	½Fl....	Sp....	4.3	Sg....	Sg....	½El..	¼El..	I-Rw...	I-Fw...	WS.....	Disk....	PG....	Waverley
BLIC..	Mag..	Yes...	12	Yes...	Co....	Eng..	4	R...	Fab..	Fab..	½Fl....	Sp....	4.3	Sg....	Sg....	½El..	½El..	I-Rw...	I-Rw...	WW....	HS....	GC....	Westwood
Fellow	Mag..	Yes...	12	Yes...	Co....	Sep..	3	R...	Fab..	Fab..	¾Fl....	Sp....	4.3	Sg....	TA...	½El..	¾El..	I-Rw...	I-Rw...	WW....	HS....	PG....	Whitlock
Fellow	Mag..	Yes...	12	Yes...	SP....	Eng..	3	R...	Met..	No..	¾Fl....	Sp....	4.3	Sg....	TA...	½El..	½El..	I-Rw...	I-Rw...	WW....	HS....	PG....	Whitlock
BLIC..	Bat...	Yes...	12	Yes...	Co....	Eng..	3	R...	Met..	Fab..	½Fl....	Sp....	5.6	Sg....	Sg....	¼El..	¼El..	I-Rw...	I-Rw...	WW....	HS....	PG....	Wolseley
BLIC..	Bat...	Yes...	12	Yes...	MO....	RA....	3	R...	Met..	No..	½Fl....	Wo....	5.2	Sg....	Sg....	¼El..	¼El..	I-Rw...	I-Rw...	WW....	HS....	PG....	Wolseley
BLIC..	Mag..	Yes...	12	Yes...	MO....	Sep..	3	R...	Met..	Met..	½Fl....	Wo....	5.2	Sg....	TT..	¼El..	¼El..	I-Rw...	I-Rw...	WW....	HS....	PG....	Wolseley
BLIC..	Bat...	Yes...	12	Yes...	MO....	Sep..	4	R...	Met..	Met..	½Fl....	Sp....	4.8	Sg....	TA...	¼El..	¼El..	I-Rw...	I-Rw...	WW....	HS....	PG....	Wolseley
BLIC..	Mag..	Yes...	12	Yes...	MO....	Sep..	4	R...	Met..	Met..	FF.....	Wo....	4.6	Sg....	TA...	½El..	Cant..	I-Rw...	E-Tr...	WW....	Wire....	PG....	Wolseley
BLIC..	Mag..	Yes...	12	Yes...	MO....	Sep..	4	R...	Met..	Met..	FF.....	Wo....	3.5	Sg....	TA...	½El..	Cant..	I-Rw...	E-Tr...	WS.....	Wire....	PG....	Wolseley

Man—Integral intake and exhaust manifold
MD—Multi Dry Plate
Met—Metallic
MO—Multi Plates in Oil
NM—Non-Metallic
O } —Optional
Opt }
OC—Oil Cups
OH—Overhead
PG—Pressure Gun
Plan—Planetary

Pr CS—Pressure to crankshaft bearings and big ends through hollow crankshaft
Pres—Pressure
R—Right Hand
RA—Unit with Rear Axle
R&P—Rack and Pinion
RR—Radius Rods
S—Sleeve Type
Sep—Cast Separately
Sep—Separate Unit

Sg—Springs
SN—Screw and Nut
SO—Single Plate in Oil
Sp—Spiral Bevel
SP—Single Dry Plate
Splash—Pump and Troughs
SpPr—Pressure to main bearings, splash to other parts
St—Steel
StStraight Bevel
T—Valves opposite sides

TA—Torque Arm
Ther—Thermostatic Valve
ThS—Thermo Siphon
T&S—Thermostat and Shutters
TT—Unit with Torque Tube
Vacu—Vacuum
Wat—Water
W&E—Water and Exhaust
Wo—Worm
WS—Worm and Segment
WW—Worm and Worm Wheel

Continental Passenger Car Chassis Specifications

MAKE AND MODEL	Wheelbase (Ins.)	Tread (Ins.)	Tire Size (m.m.)	ENGINE: Number of Cylinders Bore and Stroke (Ins.)	No. of Main Bearings	Cylinders: Head	Cylinders: Valve Arrangement	Cylinders: No. Cast in One Block	Cylinders: Cast With Upper-Half of Crankcase	Piston Material	Camshaft: Location	Camshaft: Drive	Oiling System	Water Circulation	Fuel System: Carbureter Make	Fuel System: Fuel Feed	ELECTRICAL SYSTEM: Generator System Make	Current Sources	Battery Voltage	Equipped With Electrical Starter	Equipped With Electrical Generator	TRANSMISSION: Clutch Type	Gearset: Location	Gearset: No. of Forward Speeds	Gearset: Position of Gearshift Lever	Universal Joints Number and Type	Rear Axles: Final Drive	Rear Axles: Gear Ratio	Rear Axles: Propulsion Taken by	Rear Axles: Torque Taken By	RUNNING GEAR: Springs: Front	Springs: Rear	Foot Brake: Type and Location	Foot Brake: Operated Through	Hand Brake Type & Location	Steering Gear, Type	Chassis Lubrication
FRENCH																																					
Alba	118	49	765x105	4-2.75x5.11	2	Int.	I.	4	Sep.	CI.	CC.	Heli.	Pres.	ThS.	Zen.	V.	.....	Mag.	6	Yes.	Yes.	Co.	Sep.	4	R.	2-Met.	ST.	4.1	SP.	SP.	½El.	½El.	I Rw.	Rod.	I Rw.	WS.	PG.
Alba	112	49	760x 90	4-2.55x5.11	2	Int.	I.	4	Sep.	CI.	CC.	Heli.	Pres.	ThS.	Zen.	V.	.....	Mag.	6	Yes.	Yes.	Co.	Sep.	3	R.	2-Met.	ST.	4.5	SP.	SP.	½El.	½El.	I Rw.	Rod.	I Rw.	WS.	PG.
Amilcar	91	43	700x 80	4-2.16x3.74	2	Det.	L.	4	Int.	Al.	CC.	Heli.	Spla.	ThS.	Sol.	G.	Ducell	Mag.	6	Yes.	Yes.	MD.	Eng.	3	C.	1-Fab.	Sp.	4.2	SP.	TT.	¼El.	¼El.	I Rw.	Rod.	I Rw.	WS.	PG.
Amilcar	96	43	700x 80	4-2.28x3.74	2	Det.	L.	4	Int.	Al.	CC.	Heli.	Spla.	ThS.	Sol.	G.	Ducell	Mag.	6	Yes.	Yes.	MD.	Eng.	3	R.	1-Fab.	Sp.	4.5	SP.	TT.	½El.	Cant.	I FR.	Rib.	I Rw.	WS.	PG.
Ariès	99	40	650x 65	4-2.36x3.34	2	Det.	I.	4	Int.	CI.	OH.	Heli.	Pump.	ThS.	Zen.	G.	.....	Mag.	6	Yes.	Yes.	MD.	Sep.	3	C.	2-Fab.	ST.	.....	SP.	SP.	¼El.	¼El.	I Rw.	Rod.	I Rw.	WS.	GC.
Ariès	114	49	815x105	4-2.83x4.72	2	Det.	I.	4	Sep.	CI.	OH.	Heli.	Pump.	ThS.	Zen.	G.	.....	Mag.	6	Yes.	Yes.	MD.	Sep.	3	C.	2-Fab.	ST.	.....	SP.	SP.	½El.	½El.	I Fw.	Rod.	I Fw.	WS.	GC.
Ariès	125	54	880x120	4-3.34x5.51	3	Int.	L.	4	Sep.	CI.	CC.	Heli.	Pump.	ThS.	Zen.	V.	.....	Mag.	6	Yes.	Yes.	MD.	Eng.	4	R.	1-Met.	ST.	.....	SP.	TT.	½El.	½El.	I Fw.	Rod.	I FR.	WS.	GC.
Autran	132	56	880x120	4-3.34x5.11	3	Det.	L.	4	Sep.	CI.	CC.	Heli.	Pres.	Pump.	Zen.	V.	Blériot	Mag.	12	Yes.	Yes.	MD.	Eng.	4	.....	1-Met.	Sp.	4.0	TT.	TT.	½El.	Cant.	I Rw.	Rod.	I Rw.	WN	GC.
Ballot	122	53	820x120	4-2.75x5.11	3	Det.	I.	4	Sep.	Al.	OH.	Heli.	Pres.	Pump.	Zen.	V.	Delco	M&B.	6	Yes.	Yes.	MD.	Eng.	4	R.	2-Met.	Sp.	4.5	SP.	SP.	½El.	½El.	I FR.	Rod.	I Rw.	WN	PG.
Barré	114	49	760x 90	4-2.63x4.72	2	Int.	L.	4	Sep.	CI.	CC.	Chain.	Pump.	ThS.	Sol.	G.	Delco	Mag.	6	Yes.	Yes.	MD.	Eng.	4	R.	1-Met.	Sp.	4.2	SP.	TT.	½El.	Cant.	I Tr.	Rod.	I Rw.	WS.	GC.
Barré	120	55	765x105	4-2.95x5.11	2	Int.	L.	4	Sep.	CI.	CC.	Chain.	Pres.	ThS.	Zen.	G.	Ducell	Mag.	12	Yes.	Yes.	Co.	Sep.	4	R.	1-Met.	Sp.	4.0	SP.	TT.	½El.	Cant.	I Tr.	Rod.	I Rw.	WS.	GC.
Barré	118	51	765x105	4-2.75x4.33	2	Det.	I.	4	Sep.	Al.	OH.	Heli.	Pres.	ThS.	Sol.	G.	Ducell	Mag.	6	Yes.	Yes.	MD.	Eng.	4	R.	1-Met.	Sp.	4.2	SP.	TT.	½El.	½El.	I Tr.	Rod.	I Rw.	WS.	GC.
Bazelaire, de	102	47	700x 80	4-2.44x3.70	2	Det.	I.	4	Sep.	CI.	OH.	Heli.	Pres.	ThS.	Sol.	V.	Ducell	Mag.	6	Yes.	Yes.	Co.	Eng.	4	R.	2-Met.	Sp.	5.0	SP.	SP.	½El.	½El.	I FR.	Rod.	I Tr.	WN	PG.
Bazelaire, de	114	51	765x105	4-2.83x4.33	2	Det.	I.	4	Sep.	Al.	OH.	Heli.	Pres.	ThS.	Sol.	V.	Ducell	Mag.	6	Yes.	Yes.	MD.	Eng.	4	R.	2-Met.	Sp.	4.6	SP.	SP.	½El.	½El.	I FR.	Rod.	I Tr.	WW	PG.
Bazelaire, de	114	51	765x105	4-2.83x4.72	2	Det.	I.	4	Sep.	Al.	OH.	Heli.	Pres.	ThS.	Sol.	V.	Ducell	Mag.	6	Yes.	Yes.	MD.	Eng.	4	R.	2-Met.	Sp.	4.6	SP.	SP.	½El.	½El.	I FR.	Rod.	I Tr.	WW	PG.
Bédélia	104	40	650x 65	2-3.14x3.93	2	Int.	L.	1	Sep.	CI.	CC.	Spur.	Spla.	ThS.	Zen.	G.	Gadot	Mag.	6	No.	No.	Fr.	.....	3	R.	None.	Bel.	3.5	SP.	RR.	½El.	Cant.	E Tr.	Rod.	E Rw.	Be.	GC.
Bédélia	104	40	650x 65	1-2.99x2.99	2	Int.	V.	1	Sep.	CI.	No.	None.	Spla.	Air.	Zen.	G.	Gadot	Mag.	6	No.	No.	Fr.	.....	3	R.	None.	Bel.	3.5	SP.	RR.	¼El.	Cant.	E Tr.	Rod.	E Rw.	Be.	GC.
Béchereau	110	57	710x 90	4-2.55x3.54	2	Det.	I.	4	Sep.	CI.	OH.	Spur.	Pres.	ThS.	Sol.	G.	Blériot	Mag.	6	Yes.	Yes.	Co.	Eng.	3	R.	2-Met.	Sp.	5.0	SP.	SP.	½El.	.....	I Rw.	Rod.	I Rw.	.....	GC.
Benjamin	90	43	650x 65	2-2.59x3.14	2	Det.	V.	2	Sep.	Al.	No.	None.	Spla.	ThS.	Opt.	G.	.....	Mag.	6	No.	No.	MD.	Eng.	3	C.	1-Fab.	ST.	.....	TT.	TT.	T½E.	¼El.	I Rw.	Rod.	I Rw.	WS.	PG.
Benjamin	90	43	700x 80	3-2.59x3.14	2	Det.	V.	3	Sep.	Al.	No.	None.	Spla.	ThS.	Opt.	G.	.....	Mag.	6	No.	No.	MD.	Eng.	3	C.	1-Fab.	ST.	.....	TT.	TT.	T½E.	½El.	I Rw.	Rod.	I Rw.	WS.	PG.
Berliet	110	51	710x 90	4-2.44x3.77	2	Det.	I.	4	Sep.	Al.	CC.	Heli.	Pres.	ThS.	Zen.	G.	S E V	Mag.	6	Yes.	Yes.	MD.	Eng.	4	C.	2-Fab.	Sp.	6.2	SP.	SP.	½El.	½El.	I FR.	Cab.	I Rw.	WS.	PG.
Berliet	120	56	765x105	4-3.14x5.11	3	Det.	L.	4	Sep.	CI.	CC.	Heli.	Pres.	ThS.	Sol.	V.	N-East	Mag.	12	Yes.	Yes.	MD.	Eng.	3	C.	1-Met.	Sp.	3.8	SP.	TT.	½El.	Cant.	I Rw.	Rod.	I Rw.	WS.	PG.
Berliet	124	56	820x120	4-3.14x5.11	3	Det.	L.	4	Sep.	CI.	CC.	Heli.	Pres.	ThS.	Sol.	V.	N-East	Mag.	12	Yes.	Yes.	MD.	Eng.	4	C.	1-Met.	Sp.	4.5	SP.	TT.	½El.	Cant.	I Rw.	Rod.	I Rw.	WS.	PG.
Berliet	130	56	820x120	4-3.14x5.11	3	Det.	L.	4	Sep.	Al.	CC.	Heli.	Pres.	Pump.	Sol.	V.	N-East	Mag.	12	Yes.	Yes.	MD.	Eng.	4	C.	2-Fab.	Sp.	4.5	SP.	SP.	½El.	½El.	I FR.	Rod.	I Rw.	WS.	PG.
Berliet	124	56	820x120	4-3.54x5.11	3	Det.	L.	4	Sep.	CI.	CC.	Heli.	Pres.	Pump.	Zen.	V.	N-East	Mag.	12	Yes.	Yes.	MD.	Eng.	4	C.	1-Met.	Sp.	4.5	SP.	TT.	½El.	Cant.	I Rw.	Rod.	I Rw.	WS.	PG.
Berliet	141	57	895x150	4-3.74x5.51	3	Det.	I.	4	Sep.	Al.	CC.	Heli.	Pres.	Pump.	Zen.	V.	N-East	Mag.	12	Yes.	Yes.	MD.	Sep.	4	C.	1-Met.	Sp.	4.7	TT.	TT.	½El.	½El.	I FR.	Rod.	I Tr.	WN	PG.
Bignan	118	51	820x120	4-2.95x4.37	3	Det.	I.	4	Sep.	Al.	OH.	Heli.	Pres.	Pump.	Viel.	V.	Marelli	Bat.	12	Yes.	Yes.	SP.	Eng.	4	C.	2-Met.	Sp.	5.0	SP.	SP.	½El.	½El.	I FT.	Rod.	I FR.	WW	PG.
Bignan	130	51	820x120	4-2.95x4.37	3	Det.	I.	4	Sep.	Al.	OH.	Heli.	Pres.	Pump.	Viel.	V.	Marelli	Bat.	12	Yes.	Yes.	SP.	Eng.	4	C.	2 Met.	Sp.	5.0	SP.	SP.	½El.	½El.	I FT.	Rod.	I FR.	WW	PG.
B.N.C.	90	39	700x 80	4-2.16x3.70	2	Det.	L.	4	Sep.	CI.	CC.	Spur.	Pump.	ThS.	Zen.	G.	None.	Mag.	.....	No.	No.	MD.	Eng.	3	R.	2-Fab.	St.	4.4	SP.	SP.	½El.	Cant.	I Rw.	Rod.	I Rw.	WS.	PG.
B.N.C.	90	39	700x 80	4-2.24x3.74	2	Det.	L.	4	Sep.	Al.	CC.	Spur.	Pump.	ThS.	Sol.	G.	None.	Mag.	.....	No.	No.	MD.	Eng.	3	R.	2-Fab.	St.	4.0	SP.	SP.	½El.	Cant.	I Rw.	Rod.	I Rw.	WS.	PG.
B.N.C.	98	39	700x 80	4-2.16x3.70	2	Det.	L.	4	Sep.	CI.	CC.	Spur.	Pump.	ThS.	Zen.	G.	None.	Mag.	.....	No.	No.	MD.	Eng.	3	R.	2-Fab.	St.	4.4	SP.	SP.	½El.	Cant.	I Rw.	Rod.	I Rw.	WS.	PG.
B.N.C.	98	39	700x 80	4-2.24x3.74	2	Det.	L.	4	Sep.	Al.	CC.	Spur.	Pump.	ThS.	Sol.	G.	None.	Mag.	.....	No.	No.	MD.	Eng.	3	R.	2-Fab.	St.	4.0	SP.	SP.	½El.	Cant.	I Rw.	Rod.	I Rw.	WS.	PG.
Bollée, Léon	118	51	765x105	4-2.83x4.72	3	Det.	I.	4	Sep.	CI.	CC.	Chain.	Pres.	Pump.	Sol.	V.	N-East	Mag.	12	Yes.	Yes.	MD.	Eng.	4	R.	1 Met.	Sp.	4.5	SP.	TT.	½El.	Cant.	I FR.	Rod.	I Rw.	WS.	PG.
Bollée, Léon	118	51	765x105	4-2.83x4.72	3	Det.	I.	4	Sep.	Al.	CC.	Chain.	Pres.	Pump.	Sol.	V.	N East	Mag.	12	Yes.	Yes.	MD.	Eng.	4	R.	1-Met.	Sp.	4.5	SP.	TT.	½El.	½El.	I FR.	Rod.	I Rw.	WS.	PG.
Bollée, Léon	123	52	815x105	4-3.14x5.11	3	Int.	L.	4	Sep.	CI.	CC.	Chain.	Pump.	Pump.	Sol.	V.	S E V	Mag.	12	Yes.	Yes.	Co.	Sep.	4	R.	2-Met.	ST.	4.2	SP.	SP.	½El.	½El.	I Rw.	Rod.	I Rw.	WS.	PG.
Bollée, Léon	137	56	895x135	6-3.14x5.11	4	Det.	I.	4	Sep.	CI.	OH.	Chain.	Pump.	Pump.	Sol.	V.	S E V	Mag.	12	Yes.	Yes.	MD.	Eng.	4	R.	1-Met.	ST.	3.6	SP.	TT.	½El.	½El.	I FR.	Rod.	I Rw.	WS.	PG.
Brasier	122	53	815x105	4-2.91x4.72	5	Det.	I.	4	Sep.	CI.	CC.	Heli.	Pump.	Pump.	Coz.	V.	Ducell	Bat.	12	Yes.	Yes.	MD.	Eng.	4	R.	1-Met.	Sp.	.....	TT.	TT.	½El.	½El.	I FR.	Cab.	I Rw.	WS.	PG.
Brasier	125	55	820x120	4-2.91x4.72	5	Det.	I.	4	Sep.	CI.	CC.	Heli.	Pump.	Pump.	Coz.	V.	Ducell	M&B.	12	Yes.	Yes.	MD.	Eng.	4	R.	1-Met.	Sp.	.....	TT.	TT.	½El.	½El.	I FR.	Cab.	I Rw.	WS.	PG.
Buchet	114	46	760x 90	4-2.63x4.33	2	Int.	L.	4	Sep.	CI.	CC.	Chain.	Pump.	ThS.	Zen.	G.	Ducell	Mag.	12	Yes.	Yes.	Co.	Eng.	4	C.	2-Met.	Sp.	4.1	SP.	SP.	½El.	½El.	I FR.	Rod.	I Rw.	WW	PG.
Bugatti	100	43	710x 90	4-2.71x3.93	3	Int.	I.	4	Sep.	Al.	OH.	Heli.	Pres.	Pump.	Zen.	P.	Opt.	Mag.	.....	No.	No.	MD.	Sep.	4	R.	2-Met.	ST.	3.4	SP.	TA.	½El.	½El.	I Rw.	Rod.	I Rw.	WW	GC.
Bugatti	112	47	765x105	8-2.36x3.46	3	Int.	I.	8	Sep.	Al.	OH.	Heli.	Pump.	Pump.	Zen.	P.	Opt.	Mag.	.....	Opt.	Yes.	MD.	Sep.	4	R.	2-Met.	ST.	3.6	SP.	TA.	½El.	½El.	I FR.	Rod.	I Rw.	WW	GC.
Buire, La	117	51	765x105	4-2.75x4.72	3	Det.	I.	4	Sep.	CI.	CC.	Chain.	Pres.	ThS.	Zen.	G.	Ducell	Mag.	12	Yes.	Yes.	MD.	Eng.	4	C.	1-Met.	Sp.	.....	SP.	TT.	½El.	½El.	I FR.	Rod.	I Rw.	WW	PG.
Buire, La	117	51	820x120	4-2.95x5.90	3	Det.	I.	4	Sep.	CI.	CC.	Chain.	Pres.	Pump.	Zen.	V.	Ducell	Mag.	12	Yes.	Yes.	Co.	Eng.	4	C.	1-Met.	Sp.	.....	SP.	TT.	½El.	Cant.	I FR.	Rod.	I Rw.	WW	PG.
Charron	134	57	880x120	4-3.34x5.90	3	Int.	L.	4	Sep.	CI.	CC.	Spur.	Pump.	Pump.	Zen.	G.	West.	Mag.	6	Yes.	Yes.	Co.	Sep.	4	C.	2-Met.	ST.	4.0	SP.	SP.	½El.	½El.	I Rw.	Rod.	I Rw.	WW	GC.
Charron	134	57	880x120	4-3.34x5.90	3	Int.	L.	4	Sep.	Al.	CC.	Spur.	Pump.	Pump.	Zen.	G.	West.	Mag.	6	Yes.	Yes.	Co.	Sep.	4	C.	2-Met.	ST.	3.3	SP.	SP.	½El.	Cant.	I Rw.	Rod.	I Rw.	WW	GC.
Charron	100	45	710x 90	4-2.28x3.93	2	Int.	L.	4	Sep.	CI.	CC.	Spur.	Spla.	ThS.	Zen.	G.	Ducell	Mag.	6	Yes.	Yes.	Co.	Sep.	3	C.	2-Met.	ST.	4.6	SP.	SP.	½El.	½El.	I Rw.	Rod.	I Rw.	WW	GC.
Chenard & Walcker	111	47	710x 90	4-2.71x3.93	2	Int.	L.	4	Sep.	Al.	CC.	Chain.	Pres.	ThS.	Sol.	G.	Gaumo.	Mag.	12	Yes.	Yes.	MD.	Eng.	3	R.	2-Fab.	Sp.	5.5	SP.	TT.	½El.	½El.	I Rw.	Rod.	I Rw.	WS.	PG.
Chenard & Walcker	111	52	765x105	4-2.75x5.11	2	Int.	L.	4	Sep.	Al.	CC.	Chain.	Pres.	ThS.	Sol.	V.	Gaumo.	Mag.	12	Yes.	Yes.	MD.	Sep.	4	R.	2-Fab.	Sp.	5.0	SP.	TT.	½El.	½El.	I FR.	Rod.	I Rw.	WS.	PG.
Chenard & Walcker	119	53	820x120	4-2.71x5.11	2	Det.	L.	4	Sep.	Al.	CC.	Chain.	Pres.	ThS.	Sol.	V.	Gaumo.	Mag.	12	Yes.	Yes.	MD.	Eng.	4	R.	2-Fab.	Sp.	5.0	SP.	TT.	½El.	½El.	I FR.	Rod.	I Rw.	WS.	PG.
Chenard & Walcker	121	55	880x120	4-3.14x5.90	3	Int.	L.	4	Sep.	Al.	CC.	Chain.	Pres.	ThS.	Sol.	V.	Gaumo.	Mag.	12	Yes.	Yes.	MD.	Sep.	4	R.	1-Met.	Sp.	4.6	SP.	TT.	½El.	½El.	I FR.	Rod.	I Rw.	WS.	PG.
Chenard & Walcker	131	55	880x120	4-3.14x5.90	3	Int.	L.	4	Sep.	Al.	CC.	Chain.	Pres.	ThS.	Sol.	V.	Gaumo.	Mag.	12	Yes.	Yes.	MD.	Sep.	4	R.	1-Met.	Sp.	4.6	SP.	TT.	½El.	½El.	I FR.	Rod.	I Rw.	WS.	PG.
Chenard & Walcker	117	53	820x120	4-2.71x5.11	2	Det.	I.	4	Sep.	Al.	OH.	Spur.	Pres.	ThS.	Sol.	V.	Gaumo.	Mag.	12	Yes.	Yes.	MD.	Eng.	4	C.	1 Fab.	Sp.	4.5	SP.	TT.	½El.	½El.	I FT.	Rod.	I FR.	WS.	PG.
Chenard & Walcker	121	55	895x135	4-3.11x5.90	3	Det.	I.	4	Sep.	Al.	OH.	Chain.	Pres.	ThS.	Sol.	V.	Gaumo.	Mag.	12	Yes.	Yes.	MD.	Sep.	4	R.	1 Met.	Sp.	4.2	SP.	TT.	½El.	½El.	I FR.	Rcd.	I Rw.	WS.	PG.
Chenard & Walcker	131	55	895x135	4-3.11x5.90	3	Det.	I.	4	Sep.	Al.	OH.	Chain.	Pres.	ThS.	Sol.	V.	Gaumo.	Mag.	12	Yes.	Yes.	MD.	Sep.	4	R.	1 Met.	Sp.	4.6	SP.	TT.	½El.	½El.	I FR.	Rod.	I Rw.	WS.	PG.
Chenard & Walcker	146	57	935x135	8-2.71x5.11	3	Det.	I.	4	Sep.	Al.	OH.	Chain.	Pres.	ThS.	Sol.	V.	Gaumo.	Mag.	12	Yes.	Yes.	MD.	Eng.	4	C.	1 Fab.	Sp.	.....	SP.	TT.	½El.	½El.	I FT.	Rod.	I FR.	WS.	PG.
Chenard (Louis)	111	51	765x105	4-2.67x3.94	3	Det.	L.	4	Sep.	CI.	CC.	Spur.	Pres.	ThS.	Zen.	G.	Ducell	Mag.	6	Yes.	Yes.	Co.	Eng.	4	R.	2 Met.	Sp.	4.6	SP.	SP.	½El.	½El.	I FR.	Rcd.	I Rw.	WS.	GC.
Chenard (Louis)	102	47	710x 90	4-2.32x3.93	2	Det.	L.	4	Sep.	CI.	CC.	Spur.	Pres.	ThS.	Zen.	G.	Ducell	Mag.	6	Yes.	Yes.	Co.	Eng.	3	R.	2 Met.	Sp.	4.6	SP.	SP.	½El.	½El.	I Rw.	Rod.	I Rw.	WS.	GC.
Citroen	88	47	700x 80	4-2.16x3.54	2	Det.	L.	4	Sep.	CI.	CC.	Heli.	Pump.	ThS.	Sol.	G.	Own.	Mag.	6	Yes.	Yes.	SP.	Eng.	3	C.	1 Fab.	HB.	4.8	SP.	TT.	¼El.	D¼E.	I Tr.	Rod.	I Rw.	WS.	PG.
Citroen	111	47	710x 90	4-2.67x3.93	2	Det.	L.	4	Sep.	CI.	CC.	Heli.	Pres.	ThS.	Sol.	G.	Own.	Mag.	6	Yes.	Yes.	SP.	Eng.	3	C.	2 Fab.	HB.	4.4	SP.	SP.	¼El.	D¼E.	I Tr.	Rod.	I Rw.	WS.	PG.
Cie Gle des Voitures à Paris	113	51	765x105	4-2.75x4.72	2	Int.	L.	4	Sep.	CI.	CC.	Spur.	Pump.	ThS.	Sol.	G.	Delco	Bat.	6	Yes.	Yes.	Co.	Sep.	3	C.	2 Met.	Sp.	.....	SP.	SP.	½El.	½El.	I FR.	Cab.	I Rw.	WS.	PG.
Corre-la-Licorne	106	51	710x 90	4-2.55x3.95	2	Det.	L.	4	Sep.	Al.	CC.	Spur.	Pres.	ThS.	Sol.	G.	Ducell	Mag.	6	Yes.	Yes.	Co.	Sep.	4	R.	2 Met.	Sp.	4.3	SP.	SP.	½El.	½El.	I Rw.	Rod.	I Rw.	WS.	PG.
Corre-la-Licorne	113	51	760x 90	4-2.63x4.72	2	Int.	L.	4	Sep.	CI.	CC.	Chain.	Pump.	ThS.	Sol.	G.	Ducell	Mag.	6	No.	No.	Co.	Sep.	4	R.	2 Met.	Sp.	4.3	SP.	SP.	½El.	½El.	I Rw.	Rod.	I Rw.	WS.	PG.
Corre-la-Licorne	135	58	880x120	4-3.34x5.11	3	Det.	L.	4	Sep.	Al.	CC.	Spur.	Pres.	ThS.	Sol.	G.	Ducell	Mag.	12	Yes.	Yes.	Co.	Sep.	4	R.	2 Met.	Sp.	5.7	SP.	SP.	½El.	½El.	I Rw.	Rod.	I Rw.	WS.	PG.
Corre-la-Licorne	127	55	815x105	4-2.95x5.11	3	Det.	L.	4	Sep.	Al.	CC.	Spur.	Pres.	ThS.	Sol.	V.	Ducell	Mag.	12	Yes.	Yes.	Co.	Sep.	4	R.	2 Met.	Sp.	4.7	SP.	SP.	½El.	½El.	I FR.	Cab.	I Rw.	WS.	PG.
Cottin & Desgouttes	126	55	820x120	4-3.14x5.11	5	Det.	I.	4	Sep.	Al.	CC.	Chain.	Pres.	Pump.	Zen.	V.	.....	M&B.	12	Yes.	Yes.	MD.	Eng.	4	C.	1 Met.	Sp.	4.3	TT.	TT.	½El.	½El.	I FR.	Rod.	I Rw.	WN	PG.
Cottin & Desgouttes	136	55	895x135	6-3.14x5.11	7	Det.	I.	6	Sep.	Al.	CC.	Chain.	Pres.	Pump.	Zen.	V.	.....	M&B.	12	Yes.	Yes.	MD.	Eng.	4	C.	1 Met.	Sp.	3.8	TT.	TT.	½El.	½El.	I FR.	Cab.	I Rw.	WN	PG.
Cottin & Desgouttes	145	57	895x135	6-3.14x5.11	7	Det.	I.	6	Sep.	Al.	CC.	Chain.	Pres.	Pump.	Zen.	V.	.....	M&B.	12	Yes.	Yes.	MD.	Eng.	4	C.	1 Met.	Sp.	4.3	TT.	TT.	½El.	½El.	I FR.	Cab	I Rw.	WN	PG.

Corre-la-Licorne	113	51	760x 90	4-2.63x4.72	2	Int.	L.	4	Sep.	CI.	CC.	Chain.	Pump.	ThS.	Sol.	G.	Ducell.	Mag.	6	No.	No.	Co.	Sep.	3	R.	2 Met.	Sp.	4.3	SP.	SP.	½El.	½El.	I.Rw.	Rod.	I.Rw.	WS.	PG.
Corre-la-Licorne	135	58	880x120	4-3.34x5.11	3	Det.	L.	4	Sep.	Al.	CC.	Spur.	Pres.	ThS.	Zen.	G.	Ducell.	Mag.	12	Yes.	Yes.	Co.	Sep.	4	R.	2 Met.	Sp.	5.7	SP.	SP.	½El.	½El.	I.Rw.	Rod.	I.Rw.	WS.	PG.
Corre-la-Licorne	127	55	815x105	4-2.95x5.11	3	Det.	L.	4	Sep.	Al.	CC.	Spur.	Pres.	ThS.	Sol.	V.	Ducell.	Mag.	12	Yes.	Yes.	Co.	Sep.	4	R.	2 Met.	Sp.	4.7	SP.	SP.	½El.	½El.	I.FR.	Cab.	I.Rw.	WS.	PG.
Cottin & Desgouttes	126	55	820x120	4-3.14x5.11	5	Det.	I.	4	Sep.	Al.	CC.	Chain.	Pres.	Pump.	Zen.	V.	....	M&B.	12	Yes.	Yes.	MD.	Eng.	4	C.	1 Met.	Sp.	4.3	TT.	TT.	½El.	½El.	I.FR.	Rod.	I.Rw.	W N	PG.
Cottin & Desgouttes	136	55	895x135	6-3.14x5.11	7	Det.	I.	6	Sep.	Al.	CC.	Chain.	Pres.	Pump.	Zen.	V.	....	M&B.	12	Yes.	Yes.	MD.	Eng.	4	C.	1 Met.	Sp.	3.8	TT.	TT.	½El.	½El.	I.FR.	Cab.	I.Rw.	W N	PG.
Cottin & Desgouttes	145	57	895x135	6-3.14x5.11	7	Det.	I.	6	Sep.	Al.	CC.	Chain.	Pres.	Pump.	Zen.	V.	....	M&B.	12	Yes.	Yes.	MD.	Eng.	4	C.	1 Met.	Sp.	4.3	TT.	TT.	½El.	½El.	I.FR.	Cab	I.Rw.	W N	PG.
De Dion Bouton	117	51	760x 90	4-2.75x4.72	2	Int.	L.	4	Sep.	Al.	CC.	Heli.	Pres.	ThS.	Sol.	G.	Victr.	Mag.	12	Yes.	Yes.	SP.	Eng.	4	R.	1 Met.	Sp.	4.0	TT.	TT.	½El.	Cant.	I.Tr.	Rod.	I.Rw.	WS.	PG.
De Dion Bouton	122	51	760x 90	4-2.75x4.72	2	Det.	I.	4	Sep.	Al.	CC.	Heli.	Pres.	Pump.	Sol.	V.	Blériot	Mag.	12	Yes.	Yes.	SP.	Eng.	4	R.	1 Met.	Sp.	4.0	TT.	TT.	½El.	Cant.	I.FR.	Rod.	I.Rw.	WS.	PG.
De Dion Bouton	134	51	815x105	4-3.07x5.11	3	Det.	I.	4	Sep.	Al.	CC.	Heli.	Pres.	Pump.	Zen.	V.	Blériot	Mag.	12	Yes.	Yes.	SP.	Eng.	4	R.	1 Met.	Sp.	4.2	TT.	TT.	½El.	Cant.	I.FR.	Rod.	I.Rw.	WS.	PG.
De Dion Bouton	141	51	895x135	4-3.74x5.51	3	Det.	I.	4	Sep.	Al.	CC.	Heli.	Pres.	Pump.	Sol.	V.	Blériot	Mag.	12	Yes.	Yes.	SP.	Eng.	4	R.	1 Met.	Sp.	4.0	TT.	TT.	½El.	Cant.	I.FR.	Rod.	I.Rw.	WS.	PG.
Delage	116	56	820x120	4-2.95x4.72	5	Det.	I.	4	Sep.	Al.	CC.	Chain.	Pres.	ThS.	Zen.	V.	Ducell.	Mag.	6	Yes.	Yes.	SP.	Eng.	4	C.	1-Met.	Sp.	....	SP.	SP.	½El.	½El.	I.FR.	Cab.	I.Rw.	WS.	PG.
Delage	135	56	895x135	6-3.14x5.90	4	Det.	I.	6	Sep.	Al.	CC.	Heli.	Pres.	Pump.	Zen.	V.	Ducell.	Mag.	6	Yes.	Yes.	SP.	Eng.	4	C.	1-Met.	Sp.	....	SP.	SP.	½El.	½El.	I.FR.	Cab.	I.Tr.	WS.	PG.
Delage	151	58	895x135	6-3.74x5.51	7	Det.	I.	6	Sep.	Al.	OH.	Heli.	Pres.	Pump.	Zen.	V.	Scint.	Mag.	6	Yes.	Yes.	SP.	Eng.	4	C.	1-Met.	Sp.	....	TT.	TT.	½El.	½El.	I.FR.	Cab.	I.Rw.	WS.	PG.
D.F.P.	98	44	700x 80	4-2.44x3.62	2	Det.	I.	4	Sep.	CI.	CC.	Heli.	Pres.	ThS.	Cla.	G.	Ducell.	Mag.	6	Yes.	Yes.	Co.	Eng.	3	C.	1-Fab.	ST.	4.0	TT.	TT.	¼El.	¼El.	I.Rw.	Rod.	I.Rw.	WW	GC.
D.F.P.	110	49	760x 90	4-2.55x4.72	2	Det.	L.	4	Sep.	CI.	CC.	Heli.	Pres.	ThS.	Cla.	G.	Ducell.	Mag.	6	Yes.	Yes.	Co.	Eng.	4	R.	2-Fab.	ST.	5.0	SP.	SP.	½El.	½El.	I.Rw.	Rod.	I.Rw.	WW	GC.
D.F.P.	122	53	820x120	4-2.75x5.11	3	Det.	I.	4	Sep.	CI.	CC.	Heli.	Pres.	ThS.	Cla.	V.	Ducell.	Mag.	6	Yes.	Yes.	MD	Eng.	4	R.	2-Fab.	ST.	5.0	TT.	TT.	½El.	½El.	I.FR.	Rod.	I.Rw.	WW	GC.
Delahaye	117	51	765x105	4-2.75x4.72	2	Int.	L.	4	Sep.	CI.	CC.	Spur.	Pump.	Pump.	Sol.	V.	West.	Mag.	6	Yes.	Yes.	SP.	Eng.	4	C.	2-Fab.	Sp.	4.4	SP.	SP.	½El.	½El.	I.FT.	Rod.	I.Rw.	WS.	PG.
Delahaye	118	51	765x105	4-2.75x4.72	2	Det.	I.	4	Sep.	Al.	OH.	Spur.	Pump.	Pump.	Sol.	V.	West.	Mag.	6	Yes.	Yes.	SP.	Eng.	4	C.	2-Fab.	Sp.	4.3	SP.	SP.	½El.	½El.	I.FT.	Rod.	I.Rw.	WS.	PG.
Delahaye	127	53	820x120	4-3.34x5.11	2	Int.	L.	4	Sep.	CI.	CC.	Spur.	Pump.	Pump.	Sol.	V.	Wert.	Mag.	6	Yes.	Yes.	SP.	Sep.	4	C.	2-Met.	Sp.	4.0	SP.	SP.	½El.	½El.	I.FT.	Rod.	I.Rw.	WS.	PG.
Delahaye	134	56	835x135	4-3.34x5.11	3	Det.	I.	4	Sep.	Al.	CC.	Spur.	Pump.	Pump.	Sol.	V.	West.	Mag.	6	Yes.	Yes.	SP.	Eng.	4	C.	2-Met.	Sp.	4.0	SP.	SP.	½El.	½El.	I.FT.	Rod.	I.Rw.	W N	PG.
Delahaye	144	57	895x135	6-3.34x5.11	4	Int.	L.	6	Sep.	CI.	CC.	Spur.	Pump.	Pump.	Coz.	V.	S E.V.	Mag.	12	Yes.	Yes.	Co.	Eng.	4	C.	2-Met.	Sp.	4.0	SP.	SP.	½El.	½El.	I.FT.	Rod.	I.Rw.	WS.	PG.
Delaugère-Clayette	112	51	760x 90	4-2.63x4.72	3	Det.	L.	4	Sep.	CI.	CC.	Chain.	Pump.	ThS.	Sol.	G.	Delco.	Bat.	6	Yes.	Yes.	Co.	Eng.	4	R.	2-Fab.	Sp.	4.9	SP.	SP.	½El.	½El.	I.FR.	Rod.	I.Rw.	WS.	GC.
Delaugère-Clayette	119	56	815x105	4-2.95x5.11	3	Det.	I.	4	Sep.	CI.	CC.	Spur.	Pump.	ThS.	Zen.	V.	S.E.V.	Mag.	6	Yes.	Yes.	Co.	Eng.	4	R.	2-Met.	Sp.	4.1	SP.	SP.	½El.	½El.	I.FR.	Rod.	I.Rw.	WS.	GC.
Delaugère-Clayette	138	56	835x135	6-3.34x5.51	4	Det.	L.	6	Sep.	Al.	CC.	Spur.	Pump.	Pump.	Zen.	V.	S.E.V.	Mag.	6	Yes.	Yes.	Co.	Eng.	4	R.	2-Met.	Sp.	3.2	SP.	SP.	½El.	½El.	I.FR.	Rod.	I.Rw.	WS.	GC.
Delaunay-Belleville	125	56	820x120	4-3.14x5.11	3	Det.	I.	4	Sep.	CI.	OH.	Bevel.	Pump.	Pump.	Sol.	V.	....	Mag.	12	Yes.	Yes.	MD.	Eng.	4	C.	2-Met.	Sp.	4.3	SP.	SP.	½El.	½El.	I.FT.	Rod.	I.Rw.	SN.	PG.
Delaunay-Belleville	133	57	880x120	6-3.07x5.51	7	Int.	L.	6	Sep.	CI.	CC.	Heli.	Pump.	Pump.	Zen.	V.	....	Mag.	12	Yes.	Yes.	MD.	Sep.	4	R.	2-Met.	Sp.	4.0	RR.	RR.	½El.	¾El.	I.FT.	Rod.	I.Rw.	SN.	GC.
Delaunay-Belleville	142	59	895x135	6-3.46x5.90	7	Int.	L.	6	Sep.	CI.	CC.	Heli.	Pump.	Pump.	Zen.	V.	....	Mag.	12	Yes.	Yes.	MD.	Sep.	4	R.	2-Met.	Sp.	3.5	RR.	RR.	½El.	¾El.	I.FT.	Rod.	I.Rw.	SN.	GC.
Derby	94	43	700x 80	1-3.14x3.89	2	Int.	V.	1	Sep.	Al.	No.	......	Spla.	ThS.	Sag.	V.	None.	Mag.	6	Opt.	Opt.	MD.	Eng.	3	C.	1-Met.	ST.	4.5	SP.	TT.	T½El.	¼El.	I.Rw.	Cab.	I.Rw.	....	PG.
Derby	94	43	700x 80	4-2.36x3.34	2	Det.	L.	4	Sep.	CI.	CC.	Heli.	Pres.	ThS.	Sag.	V.	None.	Mag.	6	Opt.	Opt	MD.	Eng.	3	C.	1-Met.	ST.	4.5	SP.	TT.	T½El.	¼El.	I.Rw.	Cab.	I.Rw.	WS.	PG.
Derby	94	43	700x 80	4-2.32x3.93	2	Det.	I.	4	Sep.	CI.	CC.	Heli.	Pres.	ThS.	Sag.	V.	None.	Mag.	6	Opt.	Opt.	MD.	Eng.	3	C.	1-Met.	ST.	4.5	SP.	TT.	T½El.	¼El.	I.Rw.	Cab.	I.Rw.	WS.	PG.
Farman	144	57	895x135	6-3.93x5.51	3	Int.	I.	6	Sep.	CI.	OH.	Heli.	Pres.	Pump.	Zen.	V.	Blériot	Mag.	12	Yes.	Yes.	MD.	Eng.	4	C.	1-Met.	Sp.	3.7	TT.	TT.	½El.	Cant.	I.FR.	Cab.	I.Rw.	W N	PG.
Farman	144	57	895x135	6-3.93x5.51	3	Int.	I.	6	Sep.	Al.	OH.	Heli.	Pres.	Pump.	Zen.	V.	Blériot	Mag.	12	Yes.	Yes.	MD.	Eng.	4	C.	1-Met.	Sp.	3.7	TT.	TT.	½El.	Cant.	I.FR.	Cab.	I.Rw.	W N	PG.
Fournier	83	41	700x 80	4-2.16x3.74	2	Det.	L.	4	Sep.	CI.	CC.	Spur.	Pres.	ThS.	Sol.	G.	None.	Mag.	....	No.	No.	Fr.	......	5	C.	1-Fab.	Ch.	4.0	SP.	RR.	¼El.	¼El.	I.Rw.	Rod.	I.Rw.	Ra.	GC.
Françon	94	43	700x 90	2-2.44x4.33	2	Det.	V.	2	Sep.	Al.	No.	......	Pump.	ThS.	Sol.	G.	Opt.	Mag.	....	Opt.	Opt.	SP.	Sep.	5	C.	2-Fab.	Ch.	3.8	SP.	RR.	½El.	¼El.	I.Rw.	Rod.	I.Rw.	SN.	PG.
Gobron	111	54	765x105	4-2.71x3.93	3	Det.	I.	4	Sep.	CI.	CC.	Heli.	Pres.	ThS.	Sol.	V.	Opt.	Bat.	....	Yes.	Yes.	Co.	Eng.	3	R.	1-Met.	Sp.	....	SP.	TT.	½El.	Cant.	E.Tr.	Rod.	I.Rw.	WS.	PG.
Guilick	110	51	765x105	4-2.91x4.35	2	Det.	I.	4	Sep.	CI.	CC.	Spur.	Pump.	ThS.	Zen.	V.	Ducell.	Mag.	6	Yes.	Yes.	Co.	Sep.	4	C.	2-Fab.	Sp.	4.1	SP.	SP.	½El.	½El.	I.FR.	Rod.	E.Tr.	WW	PG.
Guilick	106	49	765x105	4-2.75x5.11	2	Det.	L.	4	Sep.	CI.	CC.	Spur.	Pump.	ThS.	Zen.	V.	Ducell.	Mag.	6	Yes.	Yes.	Co.	Sep.	4	C.	2-Fab.	Sp.	4.1	SP.	SP.	½El.	½El.	I.FR.	Rod.	E.Tr.	WW	PG.
Guilick	100	49	765x105	4-2.59x5.11	2	Det.	L.	4	Sep.	CI.	CC.	Spur.	Pump.	ThS.	Zen.	V.	Ducell.	Mag.	6	Yes.	Yes.	Co.	Sep.	4	C.	2-Fab.	Sp.	4.1	SP.	SP.	½El.	½El.	I.FR.	Rod.	E.Tr.	WW	PG.
Hispano-Suiza	145	57	895x135	6-3.93x5.51	7	Int.	I.	6	Sep.	Al.	OH.	Bevel.	Pres.	Pump.	Sol.	V.	Blériot	Bat.	12	Yes.	Yes.	SP.	Eng.	3	R.	1-Met.	Sp.	3.4	SP.	TT.	½El.	½El.	I.FR.	Cab.	I.Rw.	W N	PG.
Hotchkiss	120	55	820x120	4-3.14x4.72	3	Det.	L.	4	Int.	Al.	CC.	Spur.	Pres.	ThS.	Zen.	V.	....	Mag.	....	Yes.	Yes.	SP.	Eng.	4	C.	2-Fab.	Sp.	....	SP.	SP.	½El.	½El.	I.FR.	Rod.	I.Rw.	WS.	PG.
Hotchkiss	132	57	895x135	4-3.74x5.51	3	Det.	I.	4	Sep.	Al.	CC.	Heli.	Pres.	Pump.	Zen.	V.	....	Mag.	....	Yes.	Yes.	Co.	Eng.	4	C.	1-Met.	Sp.	....	TT.	TT.	½El.	Cant.	I.FR.	Rod.	I.Rw.	WS.	PG.
Hurtu	121	53	765x105	4-2.99x5.11	3	Int.	L.	4	Sep.	CI.	CC.	Chain.	Pump.	ThS.	Sol.	G.	P-Rh.	Mag.	12	Yes.	Yes.	Co.	Eng.	4	R.	1-Met.	Sp.	4.0	SP.	RR.	½El.	Cant.	I.Rw.	Rod.	I.Rw.	WS.	GC.
Hurtu	121	53	765x105	4-2.75x5.11	3	Det.	I.	4	Sep.	Al.	CC.	Chain.	Pump.	ThS.	Sol.	G.	P-Rh.	Mag.	12	Yes.	Yes.	MD.	Eng.	4	R.	1-Met.	Sp.	4.0	SP.	TT.	½El.	Cant.	I.FR.	Rod.	I.Rw.	WS.	GC.
Hurtu	114	53	820x120	4-2.99x5.11	3	Int.	L.	4	Sep.	CI.	CC.	Chain.	Pump.	ThS.	Sol.	G.	P-Rh.	Mag.	12	Yes.	Yes.	Co.	Eng.	4	R.	2-Met.	Sp.	4.3	SP.	SP.	½El.	½El.	I.Rw.	Rod.	I.Rw.	WS.	GC.
Irat, Georges	126	51	820x120	4-2.71x5.11	3	Det.	I.	4	Sep.	Al.	CC.	Chain.	Pres.	Pump.	Zen.	V.	Delco	Bat.	6	Yes.	Yes.	MD.	Eng.	4	C.	2-Met.	Sp.	4.0	SP.	SP.	½El.	½El.	I.FT.	Rod.	I.Rw.	WS.	PG.
Laisné, Léon	118	51	765x105	4-2.75x4.33	2	Det.	I.	4	Sep.	Al.	OH.	Heli.	Pres.	ThS.	Sol.	G.	Ducell.	Mag.	6	Yes.	Yes.	SP.	Eng.	4	C.	1-Fab.	Sp.	4.6	SP.	TT.	Coil.	Coil.	I.Rw.	Rod.	I.Rw.	WW	PG.
Laisné, Léon	118	51	710x 90	4-2.36x3.95	2	Det.	L.	4	Sep.	CI.	CC.	Heli.	Pres.	ThS.	Sol.	G.	Ducell.	Mag.	6	Yes.	Yes.	SP.	Eng.	3	C.	1-Met.	ST.	4.0	SP.	TT.	Coil.	Coil.	I.Rw.	Rod.	I.Rw.	WW	PG.
Lorraine-Dietrich	115	55	815x105	4-2.95x5.11	3	Int.	I.	4	Sep.	Al.	CC.	Heli.	Pres.	Pump.	Sol.	G.	Delco	Bat.	6	Yes.	Yes.	MD.	Eng.	3	C.	1-Met.	Sp.	4.5	SP.	TT.	½El.	Cant.	I.FR.	Cab.	I.Rw.	W N	PG.
Lorraine-Dietrich	119	55	815x105	6-2.95x5.11	4	Int.	I.	6	Sep.	Al.	CC.	Heli.	Pres.	Pump.	Zen.	G.	Delco	Bat.	6	Yes.	Yes.	MD.	Eng.	3	C.	1-Met.	Sp.	4.0	SP.	TT.	½El.	Cant.	I.FR.	Cab.	I.Rw.	W N	PG.
Lorraine-Dietrich	131	56	895x135	6-3.54x6.29	7	Int.	L.	6	Sep.	Al.	CC.	Heli.	Pres.	Pump.	Zen.	P.	Delco	Mag.	6	Yes.	Yes.	MD.	Eng.	4	R.	2-Met.	Sp.	3.5	RR.	RR.	½El.	½El.	I.Rw.	Rod.	I.Rw.	W N	PG.
Madou	92	49	710x 90	4-2.32x3.93	2	Int.	I.	4	Sep.	Al.	CC.	Spur.	Pump.	ThS.	Zen.	G.	Ducell.	Mag.	6	Yes.	Yes.	Co.	Eng.	3	R.	2-Fab.	Sp.	4.4	SP.	SP.	½El.	½El.	I.FR.	Rod.	I.Tr.	WS.	GC.
Majola	96	46	710x 90	4-2.44x3.54	2	Int.	I.	4	Sep.	CI.	OH.	Chain.	Pump.	ThS.	Sol.	G.	Ducell.	Mag.	6	Yes.	Yes.	MD.	Sep.	4	R.	2-Met.	ST.	5.2	SP.	SP.	½El.	½El.	I.Rw.	Rod.	I.Rw.	WS.	PG.
Majola	110	48	765x105	4-2.55x3.94	2	Int.	I.	4	Sep.	CI.	OH.	Chain.	Pump.	ThS.	Sol.	G.	Ducell.	Mag.	6	Yes.	Yes.	MD.	Sep.	4	R.	2-Met.	ST.	4.3	SP.	SP.	½El.	½El.	I.Rw.	Rod.	I.Rw.	WS.	PG.
Mathis	90	43	700x 80	4-2.16x3.14	3	Int.	L.	4	Sep.	Al.	CC.	Heli.	Spla.	ThS.	Sol.	G.	Vauca.	Mag.	6	Yes.	Yes.	MD.	Eng.	4	C.	2-Fab.	Sp.	....	SP.	SP.	½El.	½El.	I.Rw.	Rod.	I.Rw.	WS.	PG.
Mathis	108	43	710x 90	6-2.16x3.14	3	Int.	L.	6	Sep.	Al.	CC.	Heli.	Spla.	ThS.	Sol.	G.	March.	Mag.	6	Yes.	Yes.	MD.	Eng.	4	C.	2-Fab.	Sp.	....	SP.	SP.	½El.	½El.	I.FR.	Rod.	I Rw.	WS.	PG.
Mathis	108	43	710x 90	6-2.36x2.75	3	Int.	I.	6	Sep.	Al.	OH.	Heli.	Pump.	Pump.	Sol.	V.	Vauca	Mag.	6	Yes.	Yes.	MD.	Eng.	4	C.	2-Fab.	Sp.	....	SP.	SP.	½El.	½El.	I FR.	Rod.	I Rw.	WS.	PG.
Morgan	83	47	650x 65	2-3.30x3.89	2	Int.	L.	1	Sep.	CI.	CC.	Spur.	Spla.	ThS.	Ama.	G.	None.	Mag.	....	No.	No.	SP.	Sep.	2	R.	......	Ch.	....	SP.	SP.	Coil.	¼El.	I Rw.	Rod.	E Rw.	Ra.	GC.
Mors	128	53	820x120	4-3.54x5.51	3	Det.	S.	4	Sep.	Al.	CC.	Chain.	Pump.	Pump.	Sol.	V.	Ducell.	Mag.	12	Yes.	Yes.	Bd.	Sep.	4	R.	2-Fab.	HB.	3.5	SP.	SP.	½El.	½El.	I FR.	Cab.	I Rw.	WS.	PG.
Mors	121	51	765x105	4-2.95x4.33	3	Det.	S.	4	Sep.	Al.	CC.	Chain.	Pump.	Pump.	Sol.	V.	Ducell.	Mag.	12	Yes.	Yes.	Bd.	Sep.	4	R.	2-Fab.	HB.	4.7	SP.	SP.	½El.	½El.	I FR.	Cab.	I Rw.	WS.	PG.
Motobloc	118	51	765x105	4-2.75x4.33	4	Int.	F.	4	Sep.	Al.	CC.	Chain.	Pres.	Pump.	Zen.	V.	P-Rh.	Mag.	....	Yes.	Yes.	MD.	Eng.	3	C.	1-Met.	Sp.	....	TT.	TT.	½El.	Cant.	I FR.	Cab.	I Rw.	WS.	PG.
Mo obloc	122	51	765x105	4-2.91x4.72	4	Int.	F.	4	Sep.	Al.	CC.	Chain.	Pres.	Pump.	Zen.	V.	P-Rh.	Mag.	....	Yes.	Yes.	MD.	Eng.	3	C.	1-Met.	Sp.	....	TT.	TT.	½El.	½El.	I FR.	Cab.	I Rw.	WS.	PG.
Motobloc	129	55	820x120	4-3.14x5.54	4	Int.	F.	4	Sep.	Al.	CC.	Chain.	Pres.	Pump.	Zen.	V.	P-Rh.	Mag.	....	Yes.	Yes.	MD.	Eng.	4	C.	1-Met.	Sp.	....	TT.	TT.	½El.	½El.	I-FT.	Cab.	I Rw.	WS.	PG.
MS	106	44	700x 80	4-2.36x3.34	2	Det.	L.	4	Sep.	CI.	CC.	Spur.	Pres.	ThS.	Zen.	G.	Ducell.	Mag.	6	Yes.	Yes.	Co.	Eng.	3	C.	2-Fab.	ST.	4.5	RR.	RR.	½El.	¼El.	I Rw.	Rod.	I Rw.	Ra.	GC.
Octo	88	41	700x 80	4-2.24x3.74	2	Int.	L.	4	Sep.	CI.	CC.	Spur.	Pres.	ThS.	Sol.	G.	S E V	Mag.	6	Yes.	Yes.	SP.	Eng.	4	C.	1-Met.	ST.	4.2	SP.	TA.	½El.	Cant.	I Rw.	Rod.	I Rw.	Pl.	GC.
Octo	108	49	760x 90	4-2.55x4.72	2	Det.	L.	4	Sep.	CI.	CC.	Chain.	Pump.	ThS.	Sol.	G.	Ducell.	Mag.	12	Yes.	Yes.	SP.	Sep.	4	C.	2-Met.	ST.	4.5	SP.	SP.	½El.	½El.	I Rw.	Rod.	I Rw.	WS.	GC.
Octo	88	41	700x 80	4-2.16x3.74	2	Int.	L.	4	Sep.	CI.	CC.	Spur.	Pres.	ThS.	Sol.	G.	None.	Mag.	....	No.	No.	SP.	Sep.	4	C.	1-Met.	ST.	3.8	SP.	TA.	½El.	Cant.	I Rw.	Rod.	I Rw.	Ra.	GC.
Omega-Six	130	54	820x120	6-2.55x3.93	4	Det.	I.	6	Sep.	Al.	OH.	Heli.	Pres.	Pump.	Coz.	V.	....	Mag.	....	Yes.	Yes.	Co.	Eng.	3	C.	1-Met.	SP.	....	SP.	SP.	½El.	½El.	I FT.	Rod.	I Rw.	WS.	PG.
Panhard	106	51	760x 90	4-2.36x3.94	2	Det.	S.	4	Sep.	Al.	CC.	Chain.	Spla.	ThS.	Own.	V.	S.E.V.	Mag.	12	Yes.	Yes.	Co.	Eng.	4	R.	1 Fab.	Sp.	....	TT.	TT.	½El.	¼El.	I.Rw.	Rib.	I.Rw.	SN.	PG.
Panhard	120	54	820x120	4-2.95x5.11	3	Det.	S.	4	Sep.	Al.	CC.	Chain.	Spla.	Pump.	Own.	V.	S.E.V.	Mag.	12	Yes.	Yes.	SP.	Eng.	4	R.	1 Fab.	Sp.	....	TT.	TT.	½El.	½El.	I.Rw.	Rib.	I.Rw.	SN.	PG.
Panhard	131	58	820x120	4-3.34x5.51	3	Det.	S.	4	Sep.	Al.	CC.	Chain.	Spla.	Pump.	Own.	V.	S.E.V.	Mag.	12	Yes.	Yes.	SP.	Eng.	4	R.	1 Fab.	Sp.	....	TT.	TT.	½El.	½El.	I.FR.	Rod.	I.Rw.	SN.	PG.
Panhard	137	58	880x120	4-3.94x5.51	5	Det.	S.	4	Sep.	Al.	CC.	Chain.	Spla.	Pump.	Own.	V.	S.E.V.	Mag.	12	Yes.	Yes.	SP.	Eng.	4	R.	1 Fab.	Sp.	....	TT.	TT.	½El.	½El.	I.FR.	Rod.	I.Rw.	SN.	PG.

ABBREVIATIONS:
A-Bos—American-Bosch
Al—Aluminum Alloy
Ama—Amac
Bat—Battery
Be—, **Beve—** Bevel
Bleri—Bleriot
C—Center
Cab—Cable
Cant—Cantilever
CC—Crankcase
Ch—, **Chai—** Chain
CI—Cast Iron
Cla—Claudel
Co—Cone
Coz—Cozette
D¼-E—Double ¼ Elliptic
De-Cos—De-Cost
Det—Detachable
Ducel—Ducelli
Eng—Unit with Engine
E-Rw—External Rear Wheels
E-Tr—External Transmission
F—Valves in head and side
Fab—Fabric
Fr—Friction
G—Gravity
Gaumo—Gaumont
GC—Grease Cups
HB—Herringbone Gear
Heli—Helical Gear
I—Valves in Head
I-FR—Internal Front Wheels
Int—Integral
I-Rw—Internal Rear Wheels
I-FT—Internal Four Wheels and Transmission
I-Tr—Internal Transmission
L—Valves at side
Ma—Magnesium Alloy
Mag—Magneto
March—Marchal
Marel—Marelli
M&B—Magneto and Battery
MD—Multiple Disk
Met—Metal
N-Ea—North East
No—None
OC—Oil Cups
OH—Overhead
Opt—Optional
P—Rhône
P—, **Pres—** Pressure
PG—Pressure Gun
Pl—Planetary
Plat—Platform
Pum—Pump
R—Right
Ra—Rack
RA—Rear Axle
Rib—Steel Ribbon
Rod—Rods
RR—Radius Rods
S—Sleeve
Sag—Saga
Scint—Scintilla
Sep—Separate
SN—Screw and Nut
Sol—Solex
Sp—Spiral Bevel
SP—Single Plate
SP—Springs
Spla—Splash
ST—Straight Bevel
Sth—Sthenos
TA—Torque Arm
ThS—Thermo Siphon
T½El—Transverse ½ Elliptic
TT—Torque Tube
V—Valveless—2 stroke
V—Vacuum
Victr—Victrix
Vie—Viel
Vulc—Vulcan
Westi—Westinghouse
WN—Worm and Nut
Wo—Worm
WS—Worm and Screw
WW—Worm and Wheel
Zen—Zenith

Continental Passenger Car Chassis Specifications—Continued

MAKE AND MODEL	Wheelbase (Ins.)	Tread (Ins.)	Tire Size (m.m.)	ENGINE: Number of Cylinders Bore and Stroke (Ins.)	ENGINE: No. of Main Bearings	ENGINE: Cylinders: Head	ENGINE: Cylinders: Valve Arrangement	ENGINE: Cylinders: No. Cast in One Block	ENGINE: Cylinders: Cast With Upper-Half of Crankcase	ENGINE: Piston Material	ENGINE: Camshaft: Location	ENGINE: Camshaft: Drive	ENGINE: Oiling System	ENGINE: Water Circulation	ENGINE: Fuel System: Carburetor Make	ENGINE: Fuel System: Fuel Feed	ELECTRICAL SYSTEM: Generator System Make	ELECTRICAL SYSTEM: Current Sources	ELECTRICAL SYSTEM: Battery Voltage	ELECTRICAL SYSTEM: Equipped With Electrical Starter	ELECTRICAL SYSTEM: Equipped With Electrical Generator	TRANSMISSION: Clutch Type	TRANSMISSION: Gearset: Location	TRANSMISSION: Gearset: No. of Forward Speeds	TRANSMISSION: Gearset: Position of Gearshift Lever	TRANSMISSION: Universal Joints Number and Type	TRANSMISSION: Rear Axles: Final Drive	TRANSMISSION: Rear Axles: Gear Ratio	TRANSMISSION: Rear Axles: Propulsion Taken by	TRANSMISSION: Rear Axles: Torque Taken By	RUNNING GEAR: Springs: Front	RUNNING GEAR: Springs: Rear	RUNNING GEAR: Foot Brake: Type & Location	RUNNING GEAR: Foot Brake: Operated Through	RUNNING GEAR: Hand Brake Type & Location	Steering Gear, Type	Chassis Lubrication
FRENCH—*Cont.*																																						
Panhard	148	58	895x135	8-3.34x5.51	9	Det.	S...	8	Sep.	Al.	CC...	Chain.	Spla.	Pump.	Own	V...	S.E.V.	Mag.	12	Yes.	Yes.	SP...	Eng...	4	R...	1 Fab.	Sp...	....	TT.	TT.	½El.	½El.	I.FR.	Rod...	I.Rw.	SN..	PG.
Perle (La)	104	51	710x 90	4-2.44x4.73	3	Det.	I...	4	Sep.	Cl.	CC...	Spur.	Pres.	Pump.	Sol.	G...	Delco	Bat.	12	Yes.	Yes.	MD..	Eng...	4	R...	2 Met.	Sp...	....	SP.	SP.	½El.	½El.	I.FR.	Cab...	I.Rw.	WS.	PG.
Peugeot	89	37	650x 65	4-1.96x3.34	2	Int.	L...	4	Int.	Al.	CC...	Chain.	Spla.	ThS.	Zen.	G...	Ducell.	Mag.	6	Yes.	Yes.	SP...	RA.	3	C.	1 Met.	Wo.	....	TT.	TT.	T½El.	½El.	I.Rw.	Rod...	I.Rw.	Bev.	PG.
Peugeot	105	47	760x 90	4-2.67x3.94	2	Det.	L...	4	Sep.	Al.	CC...	Chain.	Pump.	ThS.	Zen.	V...	Own	Mag.	12	Yes.	Yes.	MD..	Eng...	4	C.	1 Met.	Wo.	....	SP.	TA.	½El.	Cant.	I.Rw.	Rod...	I.Rw.	SN..	PG.
Peugeot	105	47	710x 90	4-2.67x3.94	2	Det.	I...	4	Sep.	Al.	CC...	Chain.	Pump.	ThS.	Zen.	V...	Own	Mag.	12	Yes.	Yes.	MD..	Eng...	4	C.	1 Met.	Sp...	....	SP.	TA.	½El.	Cant.	I FR.	Cab...	I.Rw.	SN..	PG.
Peugeot	99	47	760x 90	4-2.59x3.94	2	Int.	L...	4	Sep.	Cl.	CC...	Chain.	Pump.	ThS.	Zen.	G...	Own	Mag.	12	Yes.	Yes.	MD..	Eng...	4	C.	1 Met.	Wo.	....	SP.	TA.	½El.	Cant.	I.Rw.	Rod...	I.Rw.	SN..	PG.
Peugeot	125	54	820x120	4-3.34x5.11	3	Int.	L...	4	Sep.	Cl.	CC...	Chain.	Pres.	Pump.	Zen.	V...	S.E.V.	Mag.	12	Yes.	Yes.	MD..	Eng...	4	R...	1 Met.	Wo.	....	SP.	TA	½El.	Cant.	I.FR.	Cab...	I.Rw.	SN..	PG.
Peugeot	122	54	820x120	4-3.34x5.11	3	Det.	I...	4	Sep.	Al.	CC...	Chain.	Pres.	Pump.	Zen.	V...	S.E.V.	Mag.	12	Yes.	Yes.	MD..	Eng...	4	R...	1 Met.	Sp...	....	SP.	TA.	½El.	½El.	I.FR.	Cab...	I.Rw.	SN..	PG.
Peugeot	138	56	895x135	4-3.74x5.12	5	Det.	S...	4	Sep.	Al.	CC...	Chain.	Pres.	Pump.	Zen.	V...	Blériot	Mag.	12	Yes.	Yes.	SP...	Eng...	4	R...	1 Met.	Sp...	....	TT.	TT.	½El.	½El.	I.FR.	Cab...	I.Rw.	SN..	PG.
Ponette (La)	116	51	765x105	4-2.75x4.33	3	Det.	I...	4	Sep.	CI.	CC...	Spur.	Pres.	ThS.	Sol.	V...	Ducell.	Mag.	6	Yes.	Yes.	SP...	Eng...	4	R...	2 Fab.	Sp...	4.0	SP.	SP.	½El.	½El.	I.FR.	Rod...	I.Rw.	WS.	GC.
Ponette (La)	96	47	710x 90	4-2.44x3.70	3	Det.	L...	4	Sep.	CI.	CC...	Spur.	Pres.	ThS.	Sol.	G...	Ducell.	Mag.	6	Yes.	Yes.	SP...	Eng...	3	R...	2 Fab.	Sp...	4.7	SP.	SP.	½El.	½E'.	I.Rw.	Rod...	I.Rw.	WS.	GC.
Renault	96	45	700x 80	4-2.28x3.54	2	Det.	L...	4	Sep.	Al.	CC...	Heli.	Pump.	ThS.	Own	G...	S.E.V.	Mag.	12	Yes.	Yes.	Co...	TT.	3	C.	1 Met.	Sp...	....	TT.	TT.	½El.	½El.	I.Rw.	Rod...	I.Rw.	WS.	PG.
Renault	110	57	760x 90	4-2.95x4.72	2	Int.	L...	4	Sep.	CI.	CC...	Heli.	Pump.	ThS.	Own	G...	S.E.V.	Mag.	12	Yes.	Yes.	Co...	TT.	3	C.	1 Met.	Sp...	....	TT.	TT.	½El.	½El.	I.Rw.	Rod...	I.Rw.	WS.	PG.
Renault	125	57	820x120	4-3.34x5.51	3	Int.	L...	4	Sep.	CI.	CC...	Heli.	Pump.	ThS.	Own	V...	S.E.V.	Mag.	12	Yes.	Yes.	Co...	TT.	4	R...	1 Met.	Sp...	....	TT.	TT.	½El.	Cant.	I.FR.	Rod...	I.Rw.	WS.	PG.
Renault	150	59	835x135	6-3.34x5.51	4	Int.	L...	6	Sep.	CI.	CC...	Heli.	Pump.	ThS.	Own	V...	S.E.V.	Mag.	12	Yes.	Yes.	Co...	TT.	4	R...	1 Met.	Sp...	....	TT.	TT.	½El.	Cant.	I.FR.	Rod...	I.Rw.	WS.	PG.
Renault	157	59	895x135	6-4.33x6.29	4	Int.	L...	3	Sep.	CI.	CC...	Heli.	Pump.	ThS.	Own	V...	S.E.V.	Mag.	12	Yes.	Yes.	Co...	TT.	4	R...	1 Met.	Sp...	....	TT.	TT.	½El.	Cant.	I.FR.	Rod...	I.Rw.	WS.	PG.
Rochet-Schneider	135	57	895x135	4-3.74x5.51	3	Det.	I...	4	Sep.	Al.	CC...	Heli.	Pres.	Pump.	Zen.	V...	Blériot	Mag.	12	Yes.	Yes.	Co...	Eng...	4	C.	1 Met.	Sp...	4.1	SP.	TT.	½El.	Cant.	I.FT.	Rod...	I.Rw.	WS.	PG.
Rochet-Schneider	133	57	880x120	4-3.74x5.51	3	Int.	L...	4	Sep.	Al.	CC...	Heli.	Pres.	ThS.	Zen.	V...	Blériot	Mag.	12	Yes.	Yes.	Co...	Eng...	4	R...	1 Met.	Sp...	4.1	SP.	TT.	½El.	Cant.	I.FR.	Rod...	I.Rw.	WS.	PG.
Rochet-Schneider	140	57	895x135	6-3.93x5.11	3	Int.	L...	6	Sep.	Al.	CC...	Heli.	Pres.	Pump.	Zen.	V...	Blériot	Mag.	12	Yes.	Yes.	Co...	Sep.	4	R...	1 Met.	Sp...	3.9	SP.	TT.	½El.	Cant.	I.FR.	Rod...	I.Rw.	WS.	PG.
Rochet-Schneider	129	53	820x120	4-3.14x5.11	3	Int.	L...	4	Sep.	Al.	CC...	Heli.	Pres.	ThS.	Zen.	V...	S.E.V.	Mag.	12	Yes.	Yes.	Co...	Eng...	4	R...	1 Met.	Sp...	4.7	SP.	TT.	½El.	Cant.	I.FR.	Rod...	I.Rw.	WS.	PG.
Rolland-Pilain	118	51	765x105	4-2.75x4.73	3	Int.	L...	4	Sep.	Al.	CC...	Heli.	Pres.	ThS.	Zen.	V...	Ducell.	Mag.	12	Yes.	Yes.	Co...	Eng...	4	R...	2 Met.	ST.	....	SP.	SP.	½El.	½El.	I.FR.	Rod...	I.Rw.	WS.	PG.
Rolland-Pilain	126	52	820x120	4-2.87x4.72	3	Det.	I...	4	Sep.	Al.	OH.	Heli.	Pres.	Pump.	Zen.	V...	Ducell.	Mag.	12	Yes.	Yes.	MD.	Eng...	4	R...	1 Met.	ST.	....	SP.	TT.	½El.	½El.	I.FR.	Rod...	I.Rw.	WS.	PG.
Rolland-Pilain	100	45	765x105	8-2.32x3.54	5	Det.	I...	8	Sep.	Al.	OH.	Spur.	Pres.	Pump.	Zen.	V...	Ducell.	Mag.	12	Yes.	Yes.	MD.	Eng...	4	C.	2-Met.	Sp...	....	SP.	SP.	½El.	½El.	I.FT.	Rod...	I.Rw.	WS.	PG.
Rolland-Pilain	123	52	820x120	4-2.95x5.11	3	Det.	I...	4	Sep.	Al.	CC.	Heli.	Pres.	Pump.	Zen.	V...	Ducell.	Mag.	12	Yes.	Yes.	Co.	Eng...	4	R...	2-Met.	Sp...	....	SP.	SP.	½El.	½El.	I.FR.	Rod...	I.Rw.	WS.	PG.
Rolland-Pilain	133	55	880x120	4-3.74x5.51	3	Det.	I...	4	Sep.	Al.	OH.	Heli.	Pres.	Pump.	Zen.	V...	Ducell.	Mag.	12	Yes.	Yes.	MD.	Eng...	4	R...	2 Met.	Sp...	....	SP.	SP.	½El.	½El.	I.FR.	Rod...	I.Rw.	WS.	PG.
Roy (Georges)	110	49	710x 90	4-2.75x3.93	2	Det.	L...	4	Sep.	CI.	CC...	Chain.	Pres.	ThS.	Zen.	G...	Blériot	Mag.	6	Yes.	Yes.	Co...	Sep.	4	R...	1 Fab.	Sp...	4.6	SP.	TA.	½El.	½El.	E.Tr.	Rod...	I.Rw.	WW	GC.
Roy (Georges)	130	55	815x105	4-3.34x5.11	3	Int.	L...	4	Sep.	CI.	CC...	Chain.	Pres.	Pump.	Zen.	V...	Blériot	Mag.	12	Yes.	Yes.	Co...	Sep.	4	R...	1 Fab.	Sp...	3.1	SP.	TA	½El.	½El.	I.FR.	Rod...	I.Rw.	WW	GC.
Salmson	98	42	700x 80	4-2.44x3.54	2	Det.	I...	4	Sep.	Al.	CC.	Heli.	Pump.	ThS'	Sol.	G...	Ducell.	Mag.	6	Yes.	Yes.	Co...	Eng...	3	C.	1 Met.	ST.	4.0	TT.	TT.	½El.	½ El.	I.Rw.	Rod...	I.Rw.	WW	PG.
Salmson	98	42	700x 85	4-2.44x3.54	2	Det.	I...	4	Sep.	Al.	OH.	Heli.	Pump.	ThS.	Sol.	G...	Ducell.	Mag.	6	Yes.	Yes.	Co...	Eng...	3	C.	1 Met.	ST.	5.0	TT.	TT.	½El.	½El.	I.Rw.	Rod...	I.Rw.	WW	PG.
Salmson	112	47	710x 90	4-2.55x3.54	2	Det.	I...	4	Sep.	Al.	OH.	Heli.	Pump.	ThS.	Sol.	G...	Ducell.	Mag.	6	Yes.	Yes.	Co...	Eng...	3	C.	1 Met.	Sp...	5.0	TT.	TT.	½El.	½El.	I.Rw.	Rod...	I.Rw.	WW	PG.
S.A.R.A.	98	43	700x 80	4-2.44x3.58	2	Int.	I...	1	Sep.	Al.	CC.	Spur.	Pump.	Air.	Sol.	G...	A Bos.	Bat.	6	Yes.	Yes.	Co...	Eng...	3	C.	1 Met.	ST.	4.1	RR.	TT.	T½El.	½ El.	I.Rw.	Cab...	I.Rw.	WW	PG.
S.A.R.A.	112	44	710x 90	4-2.44x3.58	2	Int.	I...	1	Sep.	Al.	CC.	Spur.	Pump.	Air.	Sol.	G...	A Bos.	Bat.	6	Yes.	Yes.	MD.	Eng...	4	C.	1 Met.	ST.	4.6	RR.	TT.	T½El.	½ El.	I.FR.	Cab...	I.Rw.	WW	PG.
S.C.A.P.	122	51	820x120	4-2.99x5.11	3	Det.	L...	4	Sep.	CI.	CC.	Heli.	Prev.	ThS.	Sol.	V...	SOAP.	Mag.	6	Yes.	Yes.	Co...	Eng...	4	C.	2 Fab.	ST.	4.4	SP.	SP.	½El.	Plat...	I.FR.	Rod...	I.Rw.	WS.	GC.
S.C.A.P.	98	45	700x 80	4-2.44x3.58	2	Det.	L...	4	Sep.	CI.	CC.	Heli.	Pres.	ThS.	Sol.	G...	SOAP.	Mag.	6	Yes.	Yes.	Co...	Eng...	3	C.	1 Fab.	ST.	5.1	SP.	TA.	½El.	½ El.	I.Rw.	Rod...	I.Rw.	WS.	GC.
Schneider, Th.	118	53	765x105	4-2.83x4.72	3	Det.	L...	4	Sep.	CI.	CC.	Chain.	Pres.	ThS.	Zen.	G...	N Ea.	Mag.	12	Yes.	Yes.	Co.	Eng...	4	C.	2 Met.	Sp...	4.5	SP.	SP.	½El.	½El.	I.Rw.	Rod...	I.Rw.	WS.	GC.
Schneider, Th.	130	57	835x135	4-3.34x5.51	3	Det.	L...	4	Sep.	CI.	CC.	Chain.	Pres.	Pump.	Zen.	V...	P Rh.	Mag.	12	Yes.	Yes.	SP.	Eng...	4	C.	1-Met.	Sp...	4.2	TT.	TT.	½El.	Cant.	I.FR.	Rib...	I.Rw.	WS.	GC.
Schneider, Th.	143	57	895x135	6-3.22x5.51	7	Det.	L...	3	Sep.	CI.	CC.	Chain.	Pres.	Pump.	Zen.	V...	P Rh.	Mag.	12	Yes.	Yes.	SP.	Eng...	4	C.	1-Met.	Sp...	3.2	TT.	TT.	½El.	Cant.	I.FR.	Rib...	I.Rw.	WS.	GC.
Secqueville & Hoyau	106	51	765x105	4-2.55x4.33	3	Det.	I...	4	Ma.	Ma.	CC.	Heli.	Pump.	ThS.	Sol.	V...	Ducell.	Mag.	6	Yes.	Yes.	SP.	Eng...	4	C.	2-Met.	Sp...	4.5	SP.	SP.	½El.	½El.	I.FR.	Rod...	I.Rw.	WS.	PG.
Sénéchal	87	40	700x 80	4-2.16x3.74	2	Int.	L...	4	Sep.	CI.	CC.	Spur.	Pump.	ThS.	Sol.	G...		Mag.		No.	No.	SP.	Eng...	3	C.	2-Fab.	ST.		SP.	SP.	T½El.	½ El.	I.Rw.	Rod...	I.Rw.	WS.	PG.
Sidéa	110	44	710x 90	4-2.36x3.93	2	Int.	I...	4	Sep.	Al.	CC.	Spur.	Pump.	ThS.	Sol.	G...		Mag.				Co.	Sep.	3	C.	2-Fab.	ST.		SP.	SP.	½El.	½ El.	I.FR.	Rod...	I.Rw.	WS.	GC.
Sidéa	116	47	760x 90	4-2.75x3.93	2	Int.	I...	4	Sep.	Al.	CC.	Spur.	Pres.	ThS.	Sol.	G...		Mag.				SP.	Eng...	4	C.	2-Met.	ST.		SP.	SP.	½El.	½El.	I.FR.	Rod...	I.Rw.	WS.	GC.
Six	127	51	775x145	6-2.55x3.54	2	Det.	I...	6	Sep.	Al.	CC.	Heli.	Pump.	Pump.	Sol.	V...		Mag.		Yes.	Yes.	Co.	Eng...	4	C.	1-Met.	Sp...		TT.	TT.	½El.	½El.	I.FR.	Rod...	I.Rw.	WS.	PG.
Sizaire Frères	130	54	775x145	4-2.99x4.33	2	Det.	I...	4	Sep.	Ma.	OH.	Chain.	Pres.	Pump.	Cos.	V...		Mag.		Yes.	Yes.	SP.	Sep.	4	C.	2-Met.	Sp...		TT.	SP.	T½El.	T½El.	I.FR.	Cab...	I.Rw.	Ra...	PG.
S.L.I.M.	113	54	765x105	4-2.67x5.11	2	Det.	I...	4	Sep.	CI.	CC.	Spur.	Pres.	Pump.	Zen.	V...	P-Rh.	Mag.	12	Yes.	Yes.	Co...	Sep.	4	C.	2-Met.	Sp...	4.4	SP.	SP.	½El	³ El.	I.FR.	Rod...	I.Rw.	WS.	PG.
S.L.I.M.	113	55	820x120	4-3.07x5.11	2	Det.	I...	4	Sep.	CI.	CC.	Spur.	Pres.	Pump.	Zen.	V...	P-Rh.	Mag.	12	Yes.	Yes.	Co.	Sep.	4	C.	2-Met.	Sp...	4.1	SP.	SP.	½Fl.	³ El.	I.FR.	Rod...	I.Rw.	WS.	PG.
S.L.I.M.	126	56	835x135	4-3.14x5.11	2	Det.	I...	4	Sep.	CI.	CC.	Spur.	Pres.	Pump.	Zen.	V...	P-Rh.	Mag.	12	Yes.	Yes.	Co.	Sep.	4	C.	2-Met.	Sp...	4.4	SP.	SP.	½Fl.	³/₄El.	I.FR.	Rod...	I.Rw.	WS.	PG.
S.L.I.M.	118	57	765x105	4-2.67x5.11	2	Det.	I...	4	Sep.	CI.	CC.	Spur.	Pres.	Pump.	Zen.	V...	P-Rh.	Mag.	12	Yes.	Yes.	MD.	Sep.	4	C.	2-Met.	Sp...	4.5	SP.	SP.	¼El.	³/₄El.	I.FR.	Rod...	I.Rw.	WS.	PG.
Suère	111	53	710x 90	4-2.75x4.72	2	Det.	L...	4	Sep.	CI.	CC.	Heli.	Pres.	ThS.	Zen.	G...	A-Bos.	Mag.	6	Yes.	Yes.	MD.	Eng...	3	C.	1-Fab.	Sp...	4.1	SP.	TT.	½El.	Cant.	I.Rw.	Rod...	I.Rw.	WW	PG.
Talbot-Darracq	118	53	765x105	4-2.67x4.33	3	Det.	I...	4	Int.	Al.	CC...	Chain.	Pres.	Pump.	Zen.	V...	Delco	Mag.	6	Yes.	Yes.	SP.	Eng...	3	R...	1-Met.	Sp...	4.1	TT.	TT.	½El.	Cant.	I.FR.	Rod...	I.Rw.	WS.	PG.
Talbot-Darracq	126	53	820x120	4-2.95x4.72	3	Det.	I...	4	Sep.	Al.	CC.	Chain.	Pres.	Pump.	Zen.	V...	Delco	Mag.	6	Yes.	Yes.	SP.	Eng...	3	R...	1-Met.	Sp...	4.1	TT.	TT.	½El	Cant.	I.FR.	Rod...	I.Rw.	WS.	PG.
Talbot-Darracq	126	53	820x120	4-2.95x4.72	3	Det.	I...	4	Sep.	Al.	CC.	Chain.	Pres.	Pump.	Sol.	V...	Delco	Mag.	6	Yes.	Yes.	SP.	Eng...	3	R...	1-Met.	Sp...	3.9	TT.	TT.	½El	Cant.	I.FR.	Rod...	I.Rw.	WS.	PG.
Turcat-Méry	132	56	820x120	4-3.11x5.90	3	Int.	L...	4	Sep.	CI.	CC.	Chain.	Pres.	ThS.	Zen.	V...	Delco	Mag.	12	Yes.	Yes	SP.	Eng...	4	C.	2-Fab.	Sp...	4.0	SP.	SP.	½Fl.	½El.	I.FR.	Rod...	I.Rw.	WS.	GC.
Turcat-Méry	112	53	820x120	4-3.22x5.51	5	Int.	I...	4	Sep.	Al.	OH.	Bevel.	Pres.	Pump.	Zen.	V...	Delco	Bat.	12	Yes.	Yes.	SP.	Eng...	4	C.	2 Met.	Sp...	3.7	SP.	SP.	½El.	½El.	I.FR.	Rod...	I.Rw.	WS.	GC.
Unic	136	56	835x135	4-3.14x5.54	3	Det.	L...	4	Sep.	Al.	CC...	Chain.	Pres.	Pump.	Viel.	V...	Ducell.	Mag.	12	Yer.	Yer.	MD.	Eng...	4	C.	1 Met.	Sp...	4.3	SP.	SP.	½El.	Cant.	I.FT.	Rod...	I.Rw.	WS.	PG.
Unic	119	53	765x105	4-2.75x4.72	2	Det.	L...	4	Sep.	Al.	CC...	Chain.	Pres.	ThS.	Viel.	V...	Ducell.	Mag.	12	Yes.	Yes.	MD.	Eng...	4	C.	2 Met.	Sp...	4.3	SP.	SP.	½El.	Cant.	I.FT.	Rod...	I.Rw.	WS.	PG.
Unic	120	53	765x105	4-2.83x4.72	2	Det.	L...	4	Sep.	Al.	CC...	Chain.	Pres.	ThS.	Viel.	V...	Ducell.	Mag.	12	Yes.	Yes.	MD.	Eng...	4	C.	2 Met.	Sp...	4.3	SP.	SP.	½El.	Cant.	I.FT.	Rod...	I.Rw.	WS.	PG.
Vermorel	115	51	765x105	4-2.75x4.33	2	Int.	L...	4	Sep.	CI.	CC...	Heli.	Pres.	ThS.	Zen.	V...	P Rh.	Mag.	12	Yes.	Yes.	Co.	Eng...	4	R...	2 Fab.	Sp...	5.4	SP.	SP.	½El	½El	I.Rw.	Rod...	I.Rw.	WS.	PG.
Vermorel	115	51	765x105	4-2.75x4.33	2	Det.	I...	4	Sep.	Al.	CC.	Heli.	Pres.	ThS.	Zen.	V...	P Rh.	Mag.	12	Yes.	Yes.	Co.	Eng...	4	R...	2 Fab.	Sp...	5.4	SP.	SP.	½El.	½ El.	I.Rw.	Rod...	I.Rw.	WS.	PG.
Vermorel	134	56	820x120	4-3.14x5.11	3	Det.	I...	4	Sep.	Al.	OH.	Bevel.	Pres.	Pump.	Zen.	V...	P Rh.	Mag.	12	Yes.	Yes.	MD.	Eng...	4	C	2 Met.	Sp...	4.5	SP.	SP.	½El.	½El.	I.FR.	Rod...	I.Tr.	WS.	PG.
Vermorel	134	56	820x120	4-3.07x5.11	3	Int.	I...	4	Sep.	Al.	OH.	Bevel.	Pres.	Pump.	Zen.	V...	P Rh.	Mag.	12	Yes.	Yes.	MD.	Eng...	4	C.	2 Met.	Sp...	4.0	SP.	SP.	½El.	½El.	I.FR.	Rod...	I.T.	WS.	PG.
Vermorel	122	55	820x120	4-3.14x5.11	3	Int.	L...	4	Sep.	CI.	CC...	Heli.	Pres.	ThS.	Zen.	V...	P Rh.	Mag.	12	Yes.	Yes.	Co.	Eng...	4	R...	2 Met.	Sp...	5.0	SP.	SP.	½El.	Cant.	I.Rw.	Rod...	I.Rw.	WS.	PG.

Vinot-Deguingand	115	51	765x105	4-2.75x4.72	3	Int.	L...	4	Sep.	Al.	CC.	Spur.	Pump.	Pump.	Sol.	V...	Ducell.	Mag.	12	Yes.	Yes.	Co.	Sep.	4	R...	1 Fab.	Sp...	4.1	SP.	SP.	½El.	½El.	I.Rw.	Rod...	I.Rw.	WS.	PG.
Vinot-Deguingand	119	53	820x120	4-3.14x5.11	3	Int.	L...	4	Sep.	Al.	CC.	Chain.	Pump.	Pump.	Sol.	V...	Ducell.	Mag.	12	Yes.	Yes.	Co.	Sep.	4	R...	1 Fab.	Sp...	4.0	SP.	SP.	½El.	½El.	I.Rw.	Rod...	I.Rw.	WS.	PG.
Voisin	144	55	895x135	4-3.74x5.51	5	Det.	S...	4	Sep.	Al.	CC.	Chain.	Pres.	Pump.	Sol.	V...	Blériot	Mag.	12	Yes.	Yes.	MD.	Eng...	4	C.	1 Met.	Sp...	3.4	TT.	TT.	½El.	½El.	I.FR.	Cab...	I.Rw.	WN	PG.
Voisin	135	55	895x135	4-3.74x5.51	5	Det.	S...	4	Sep.	Al.	CC.	Chain.	Pres.	Pump.	Sol.	V...	Blériot	Mag.	12	Yes.	Yes.	MD.	Eng...	3	R...	1 Met.	Sp...	5.0	TT.	TT.	½El.	½El.	I.FR.	Cab...	I.Rw.	WN	PG.

Vinot-Deguingand	115	51	765x105	4–2.75x4.72	3	Int.	L.	4	Sep.	Al	CC	Spur	Pump	Pump	Sol	V	Ducell	Mag	12	Yes	Yes	Co	Sep	4	R	1 Fab	Sp	4.1	SP.	SP.	½El.	½El	I.FR.	Rod	I.Rw.	WS	PG.
Vinot-Deguingand	119	53	820x120	4–3.14x5.11	3	Int.	L.	4	Sep.	Al	CC	Chain	Pump	Pump	Sol	V	P Rh	Mag	12	Yes	Yes	Co	Sep	4	R	1 Fab	Sp	4.0	SP.	SP.	½El.	½El	I.Rw	Rod	I.Rw.	WS	PG.
Voisin	144	55	895x135	4–3.74x5.51	5	Det.	S.	4	Sep.	Al	CC	Chain	Pres.	Pump	Sol	V	Blériot	Mag	12	Yes	Yes	MD	Eng	4	R	1 Met	Sp	4.0	TT.	TT.	½El.	½El	I.FR.	Cab	I.Rw.	WN	PG.
Voisin	135	55	895x135	4–3.74x5.51	5	Det.	S.	4	Sep.	Al	CC	Chain	Pres.	Pump	Sol	V	P Rh	Mag	12	Yes	Yes	MD	Eng	4	R	1 Met	Sp	3.4	TT.	TT.	½El.	½El	I.FR.	Cab	I.Rw.	WN	PG.
Voisin	112	51	765x105	4–2.36x4.33	2	Det.	S.	4	Sep.	Al	CC	Chain	Pres.	ThS	Sol	G	P Rh	Mag	12	Yes	Yes	MD	Eng	3	R	1 Met	Sp	5.0	TT.	TT.	½El.	½El	I.FR.	Cab	I.Rw.	WN	PG.
Zebre	116	55	765x105	4–2.71x5.11	3	Det.	L.	4	Sep.	Al	CC	Heli	Pump	ThS	Sol	G		Mag	12	Yes	Yes	MD	Eng	4	C	2-Fab	Sp	4.4	SP.	SP.	½El.	½El	I.FR.	Rod	I.Tr.	WW	PG.
Zedel	115	53	765x105	4–2.95x4.72	3	Det.	L.	4	Sep.	Cl	CC	Spur	Pump	ThS	Zen	V	West	Mag	6	Yes	Yes	SP	Eng	4	R	2-Fab	Sp	4.3	SP.	SP.	½El.	½El	I.FR.	Rod	I.Rw.	WS	PG.
Zedel	132	56	880x120	4–3.34x5.51	3	Det.	I.	4	Sep.	Cl	CC	Spur	Pres	Pump	Zen	V	West	Mag	6	Yes	Yes	SP	Eng	4	R	2-Fab	Sp	3.9	SP.	SP.	½El.	½El	I.FR.	Rod	I.Rw.	WS	PG.

BELGIAN

A.D.K.	110	51	760x 90	4–2.70x4.00	3	Det.	I.	4	Sep.	Al	CC	Heli	Pres	ThS	Zen	V	Scint	Mag	12	Yes	Yes	SP	Eng	4	C	2-Fab	Sp	4.7	SP.	SP.	½El.	½El	I.FR.	Rod	I.Rw.	WS	PG.
Aoust, d'	110	49	765x105	4–2.55x5.51	3	Int.	L.	4	Sep.	Cl	CC	Spur	Pres	ThS	Zen	V	Bosch	Mag	12	Yes	Yes	MD	Sep	4	C	2-Fab	St		SP.	SP.	½El.	½El	I.Rw.	Rod	I.Rw.	WW	PG.
Aoust, d'	110	49	765x105	4–2.63x5.51	3	Int.	L.	4	Sep.	Al	CC	Spur	Pres	ThS	Zen	V	Bosch	Mag	12	Yes	Yes	MD	Sep	4	C	2-Fab	St		SP.	SP.	½El.	½El	I.FR.	Rod	I.Rw.	WW	PG.
Aoust, d	100	45	700x 80	4–2.32x3.93	2	Det.	I.	4	Sep.	Al	CC	Spur	Pump	ThS	Zen	G	S.E.V.	Mag	6	Yes	Yes	Co	Eng	3	C	2-Fab	St		TT.	SP.	½El.	½El	I.Rw.	Rod	I.Rw.	WW	PG.
Dasse	118	52	765x105	4–2.95x4.72	3	Det.	I.	4	Sep.	Al	CC	Heli	Pump	Pump	Zen	V	Scint	Mag	12	Yes	Yes	Co	Eng	3	C	2-Fab	Sp	5.0	SF.	SP.	½El.	½El	I.FR.	Rod	I.Rw.	WS	PG.
Dasse	137	55	895x135	4–3.54x5.51	3	Det.	I.	4	Sep.	Al	OH	Bevel	Pump	Pump	Zen	V	Scint	Mag	12	Yes	Yes	Co	Eng	3	C	2-Fab	Sp	4.6	SP.	SP.	½El.	½El	I.FR.	Rod	I.Rw.	WS	PG.
Dunamis	146	56	895x135	8–2.75x4.33	5	Det.	L.	8	Sep.	Al	CC	Heli	Pres	Pump	Zen	V	P-Rh	Mag	12	Yes	Yes	SP	Eng	3	C	2-Met	Sp	5.3	SP.	SP.	½El.	½El	I.FR.	Rod	I.FR.	WS	OC.
Excelsior	140	57	895x135	6–3.54x5.51	7	Det.	I.	6	Sep.	Al	OH	Bevel	Pres	Pump	Sth	V	Scint	Mag	12	Yes	Yes	MD	TT	3	C	2-Met	Sp	3.7	TT.	TT.	½El.	Cant	I.FR.	Cab	I.FR.	WW	OC.
F.N.	108	49	760x 90	4–2.55x3.93	3	Det.	I.	4	Sep.	Al	CC	Heli	Pres	ThS	Sol	V	Bosch	Mag	12	Yes	Yes	SP	Eng	3	C	2-Met	Sp	4.3	SP.	SP.	½El.	½El	I.FR.	Cab	I.Rw.	WS	PG.
F.N.	118	53	820x120	4–2.95x4.73	3	Int.	L.	4	Sep.	Cl	CC	Heli	Pres	ThS	Sol	V	Bosch	Mag	12	Yes	Yes	Co	Eng	4	C	2-Met	Sp	4.3	SP.	SP.	½ El.	½El	I.FR	Cab	I.Rw.	WS	PG.
Imperia	107	49	710x 90	4–2.48x3.14	2	Det.	S.	4	Sep.	Al	CC	Heli	Pump	ThS	Sol	V	Scint	Mag	12	Yes	Yes	SP	Eng	4	C	2-Fab	Sp	5.0	SP.	SP.	½ El.	½ El.	I.TR.	Rod	I.Rw.	WS	PG.
Jewel	103	48	710x 90	4–2.36x3.93	2	Int.	L.	4	Sep.	Cl	CC	Chain	Pump	ThS	Sol	G	De-Cos	Mag	6	Yes	Yes	SP	RA	3	C	2-Fab	St	4.6	SP.	SP.	½El.	½El	I.Rw.	Rod	I.Rw.	WS	PG.
Metallurgique	120	51	765x105	4–2.75x4.75	3	Det.	I.	4	Sep.	Al	OH	Bevel	Pres	Pump	Zen	V	Bosch	Mag	12	Yes	Yes	MD	Eng	4	C	1 Met	Sp	5.0	TT.	TT.	½El.	½El	I.FR.	Rod	I.Rw.	WW	PG.
Metallurgique	148	56	895x150	4–3.93x6.29	5	Int.	L.	4	Sep.	Al	CC	Chain	Pres	Pump	Zen	V	Bosch	Mag	12	Yes	Yes	MD	Eng	4	C	1 Met	Sp	3.7	TT.	TT.	½El.	½El	I.FR.	Cab	I.Rw.	WW	PG.
Miesse	122	58	820x120	4–2.71x5.11	3	Det.	I.	4	Int.	Al	OH	Bevel	Pres	Pump	Zen	V	P-Rh	Mag	12	Yes	Yes	MD	Eng	3	C	2-Met	Sp	5.3	SP.	SP.	½El.	½El	I.FR.	Cab	I.Rw.	WS	PG.
Miesse	145	58	895x135	8–2.71x5.11	5	Det.	I.	8	Int.	Al	OH	Bevel	Pres	Pump	Zen	V	P-Rh	Mag	12	Yes	Yes	MD	Eng	3	C	2-Met	Sp	5.3	SP.	SP.	½El.	½El	I.FR.	Cab	I.Rw.	WS	PG.
Minerva	122	53	820x120	4–2.95x4.33	3	Det.	S.	4	Sep.	Al	CC	Chain	Pres	Pump	Sth	V	Scint	Mag	12	Yes	Yes	MD	Eng	4	C	2-Met	Sp		SP.	TT.	½El.	Cant	I.Rw.	Rod	I.Rw.	WS	PG.
Minerva	135	55	895x135	4–3.54x5.51	3	Det.	S.	4	Sep.	Al	CC	Chain	Pres	Pump	Zen	V	Scint	Mag	12	Yes	Yes	MD	Sep	4	R	2-Met	Sp		SP.	TT.	½El.	Cant	I.FR.	Rod	I.Tr.	WS	PG.
Minerva	142	55	898x135	6–3.14x4.33	7	Det.	S.	6	Sep.	Al	CC	Chain	Pres	Pump	Sth	V	Scint	Mag	12	Yes	Yes	MD	Sep	4	R	2-Met	Sp		SP.	TT.	½El.	Cant	I.FR.	Rod	I.Tr.	WS	PG.
Minerva	145	55	895x135	6–3.54x5.51	7	Det.	S.	6	Sep.	Al	CC	Chain	Pres	Pump	Sth	V	Scint	Mag	12	Yes	Yes	MD	Sep	4	R	2-Met	Sp		SP.	TT.	½El.	Cant	I.FR.	Rod	I.Tr.	WS	PG.
Nagant	120	51	765x105	4–2.95x4.72	3	Det.	I.	4	Int.	Cl	CC	Heli	Pres	ThS	Sol	V	C.A.V.	Mag	12	Yes	Yes	MD	Eng	4	C	1-Met	Sp	4.2	TT.	TT.	½El.	Cant	I.FR.	Cab	I.Rw.	WS	PG.

ITALIAN

Alfa-Romeo	135	55	820x120	6–2.95x4.33	4	Det.	I.	6	Sep.	Al	OH	Heli	Pres	Pump	Zen	V	Bosch	Mag	12	Yes	Yes	MD	Eng	4	C	1-Met	Sp	4.3	SP.	TT.	½El.	½El	I.Tr.	Rod	I.Rw.	WS	GC.
Alfa-Romeo	123	55	820x120	6–2.99x4.33	4	Det.	I.	6	Sep.	Ma	OH	Heli	Pres	Pump	Zen	V	Bosch	Mag	12	Yes	Yes	MD	Eng	4	C	1-Met	Sp	3.8	SP.	TT.	½El.	½El	I.Tr.	Rod	I.Rw.	WS	GC.
Alfa-Romeo	114	55	765x105	4–2.95x4.33	3	Det.	I.	4	Sep.	Al	OH	Heli	Pres	Pump	Zen	V	Bosch	Mag	12	Yes	Yes	MD	Eng	4	C	1-Met	Sp	4.2	SP.	TT.	½El.	½El	I.Tr.	Rod	I.Rw.	WS	GC.
Ansaldo	109	51	765x105	4–2.75x4.72	3	Det.	I.	4	Sep.	Al	OH	Bevel	Pres	Pump	Zen	G	Marell	Mag	12	Yes	Yes	MD	Eng	3	C	2-Met	Sp	4.6	SP.	SP.	½El.	½El	I.FR.	Rib	E.Tr.	WW	GC.
Ansaldo	124	51	765x105	6–2.55x3.93	4	Det.	I.	6	Sep.	Al	OH	Bevel	Pres	Pump	Zen	G	Marell	Bat	12	Yes	Yes	MD	Eng	3	C	2-Met	Sp	4.6	SP.	SP.	½El.	½El	I.FR.	Rib	E.Tr.	WW	GC.
Ansaldo	116	51	765x105	6–2.55x3.93	4	Det.	I.	6	Sep.	Al	OH	Bevel	Pres	Pump	Zen	G	Marell	Bat	12	Yes	Yes	MD	Eng	3	C	2-Met	Sp	4.6	SP.	SP.	½El.	½El	I.FR.	Rib	E.Tr.	WW	GC.
Bianchi	112	51	765x105	4–2.83x4.72	3	Det.	I.	4	Sep.	Al	CC	Chain	Pres	ThS	Zen	V	C.A.V.	Mag	12	Yes	Yes	SP	Sep	4	R	1-Met	Sp	4.0	SP.	TT.	½El.	½El	I.FR.	Rod	I.Rw.	WW	GC.
Chiribiri	102	49	710x100	4–2.55x4.33	3	Det.	L.	4	Int.	Al	CC	Chain	Pump	ThS	Zen	G	Marell	Mag	6	Yes	Yes	MD	Eng	4	C	1-Fab	Sp	4.5	TT.	TT.	½El.	½El	I.Rw.	Rod	I.Rw.	WS	GC.
Chiribiri	102	49	760x 90	4–2.55x4.33	5	Int.	I.	4	Sep.	Al	OH	Chain	Pump	ThS	Zen	V	Bosch	Mag	12	Yes	Yes	MD	Eng	4	C	1-Fab	Sp	4.2	TT.	TT.	½El.	½El	I.FR.	Rod	I.Rw.	WS	GC.
Diatto	118	55	820x120	4–3.11x3.93	3	Det.	I.	4	Sep.	Cl	OH	Heli	Pres	Pump	Zen	V	Bosch	Mag	12	Yes	Yes	MD	Eng	4	R	Met	Sp	5.0	TT.	TT.	½El.	Cant	I.Tr.	Rod	I.Rw.	WW	GC.
Fiat	104	49	760x 90	4–2.55x4.33	3	Det.	L.	4	Sep.	Al	CC	Heli	Pres	Pump	Own	G	Own	Mag	12	Yes	Yes	MD	Eng	4	R	1-Met	Sp	5.1	TT.	TT.	½El.	½El	I.Rw.	Cab	I.Rw.	WW	GC.
Fiat	120	55	820x120	4–2.95x5.11	3	Det.	L.	4	Sep.	Al	CC	Heli	Pres	Pump	Own	P	Own	Mag	12	Yes	Yes	MD	Eng	4	R	1-Met	Sp	4.8	TT.	TT.	½El.	½El	I.Rw.	Rod	I.Rw.	WW	GC.
Fiat	134	55	835x135	6–2.95x5.11	4	Det.	I.	6	Sep.	Al	CC	Heli	Pres	Pump	Own	P	Own	Mag	12	Yes	Yes	MD	Eng	4	R	1-Met	Sp	4.8	TT.	TT.	½El.	½El	I.Rw.	Rod	I.Rw.	WW	GC.
Fiat	145	57	835x135	6–3.34x5.51	4	Det.	I.	6	Sep.	Al	CC	Chain	Pres	Pump	Own	F	Own	Mag	12	Yes	Yes	MD	Eng	4	C	1-Met	Sp	4.1	TT.	TT.	½El.	Cant	I.FR.	Rod	I.Rw.	Hel	PG.
Isotta-Fraschini	145	55	895x135	8–3.34x5.11	9	Det.	I.	8	Sep.	Cl	CC	Heli	Pres	Pump	Zen	V	Bosch	Mag	12	Yes	Yes	MD	Eng	3	R	1-Met	Sp	3.9	TT.	TT.	½El.	½El	I.FR.	Rod	I.Rw.	WS	GC.
Itala	112	53	765x105	4–2.83x4.72	3	Int.	L.	4	Sep.	Cl	CC	Spur	Pump	Pump	Sol	V	Marell	Mag	12	Yes	Yes	MD	Sep	4	R	1-Fab	Sp	5.0	SP.	SP.	½El.	½El	I.FR.	Rod	I.Rw.	WS	GC.
Itala	125	55	820x120	4–3.26x5.11	3	Int.	L.	4	Sep.	Al	CC	Spur	Pump	Pump	Zen	V	Marell	Mag	12	Yes	Yes	MD	Sep	4	R	1-Fab	Sp	4.7	TT.	TT.	½El.	½El	I.Tr.	Rod	I.Rw.	WW	GC.
Lancia	133	52	895x135	8–2.95x5.11	5	Det.	I.	8	Sep.	Al	OH	Heli	Pres	Pump	Zen	V	Rush	Mag	8	Yes	Yes	MD	Eng	4	C	1-Met	Sp		SP.	TA	½El.	½El	E.Tr.	Rod	I.Rw.	WW	GC.
Lancia	122	53	765x105	4–2.95x5.11	3	Det.	I.	4	Sep.	Al	OH	Heli	Pres	Pump	Zen	V	Bosch	Mag	12	Yes	Yes	MD	Sep	3	C	2-Met	Sp		SP.	SP.	Coil	½El	I.FR.	Cab	I.Rw.	WW	GC.
O.M.	110	52	765x105	4–2.71x3.93	3	Det.	L.	4	Sep.	Al	CC	Heli	Pres	ThS	Zen	V	Bosch	Bat	12	Yes	Yes	SP	Eng	4	R	1-Met	St	5.2	TT.	TT.	½El.	½El	I.Rw.	Rod	I.Rw.	WS	GC.
O.M.	122	52	765x105	6–2.55x3.93	5	Det.	L.	6	Sep.	Al	CC	Heli	Pres	ThS	Zen	V	Bosch	M&B	12	Yes	Yes	SP	Eng	4	R	1-Met	St	5.0	TT.	TT.	½El.	½El	I.FR.	Rod	I.Rw.	WS	GC.
Spa	126	55	820x120	4–3.34x4.72	3	Det.	L.	4	Sep.	Cl	CC	Spur	Pres	Pump	Zen	G		Mag		Yes	Yes	MD	Eng	4	R	1-Met	Sp	4.1	TT.	TT.	½El.	½El	I.FR.	Rod	I.Rw.	WS	GC.
Spa	126	55	820x120	4–3.34x4.72	3	Det.	L.	4	Sep.	Al	CC	Spur	Pre	Pump	Zen	V		Mag		Yes	Yes	MD	Eng	4	R	1-Met	Sp	4.9	TT.	TT.	½El.	½El	I.FR.	Rod	I.Rw.	WS	GC.
Spa	146	55	895x135	6–3.34x5.11	3	Det.	I.	6	Sep.	Cl	OH	Bevel	Pres	Pump	Zen	V		Mag		Yes	Yes	MD	Eng	4	R	1-Met	Sp	3.8	TT.	TT.	½El.	Cant	I.FR.	Rod	I.Rw.	WS	GC.

ABBREVIATIONS:

A-Bos—American-Bosch
Al—Aluminum Alloy
Ama—Amac
Bat—Battery
Be—, **Beve—** } Bevel
Bleri—Bleriot
C—Center
Cab—Cable
Cant—Cantilever
CC—Crankcase
Ch—, **Chai—** } Chain
Cl—Cast Iron
Cla—Claudel
Co—Cone
Coz—Cozette
D¼E—Double ¼ Elliptic
De-Cos—De-Cost
Det—Detachable
Ducel—Ducelli
Eng—Unit with Engine
E-Rw—External Rear Wheels
E-Tr—External Transmission
F—Valves in head and side
Fab—Fabric
Fr—Friction
G—Gravity
Gaumo—Gaumont
GC—Grease Cups
Heli—Helical Gear
HB—Herringbone Gear
I—Valves in Head
IFR—Internal Front Wheels
Int—Integral
IRw—Internal Rear Wheels
I-FT—Internal Four Wheels and Transmission
ITr—Internal Transmission
L—Valves at side
Ma—Magnesium Alloy
Mag—Magneto
March—Marchal
Marel—Marelli
M&B—Magneto and Battery
MD—Multiple Disk
Met—Metal
N-Ea—North East
No—None
Opt—Optional
OC—Oil Cups
OH—Overhead
P—Rhône
P—, **Pres—** } Pressure
PG—Pressure Gun
Pl—Planetary
Plat—Platform
Pum—Pump
R—Right
Ra—Rack
RA—Rear Axle
Rib—Steel Ribbon
Rod—Rods
RR—Radius Rods
S—Sleeve
Sag—Saga
Scint—Scintilla
Sep—Separate
SN—Screw and Nut
Sol—Solex
Sp—Spiral Bevel
SP—Single Plate
SP—Springs
Spla—Splash
ST—Straight Bevel
Sth—Sthenos
TA—Torque Arm
ThS—Thermo Siphon
T½El—Transverse ½ Elliptic
TT—Torque Tube
V—Valveless—2 stroke
V—Vacuum
Vietr—Victrix
Vie—Viel
Vulc—Vulcan
Westl—Westinghouse
WN—Worm and Nut
Wo—Worm
WS—Worm and Screw
WW—Worm and Wheel
Zen—Zenith

Continental Passenger Car Specifications—Continued

MAKE AND MODEL	GENERAL: Wheelbase (Ins.)	GENERAL: Track (Ins.)	GENERAL: Tire Size (Ins.)	ENGINE: Number of Cylinders Bore & Stroke (Ins.)	ENGINE: Piston Displacement (Cu. Ins.)	ENGINE: Rating R.P.M.	ENGINE: Rating Brake H.P.	ENGINE: Cylinder Head	ENGINE: Valve Arrangement	ENGINE: Number of Cylinders Cast In One Piece	ENGINE: Cylinders Cast With Upper Half of Crank Case	ENGINE: Piston Material	ENGINE: Camshaft Location	ENGINE: Camshaft Drive	ENGINE: Oiling System Type	ENGINE: Cooling System Medium	ENGINE: Cooling System Water Circulation	ENGINE: Fuel System Carbureter Make	ENGINE: Fuel System Fuel Feed	ELECTRICAL SYSTEM: Ignition System Make	ELECTRICAL SYSTEM: Current Sources	ELECTRICAL SYSTEM: Voltage	ELECTRICAL SYSTEM: Equipped With Electrical Starter?	ELECTRICAL SYSTEM: Equipped With Electrical Generator?	TRANSMISSION: Clutch Type	TRANSMISSION: Gearset Location	TRANSMISSION: Gearset Number of Forward Speeds	TRANSMISSION: Universals	REAR AXLE: Type	REAR AXLE: Final Drive	REAR AXLE: Propulsion Taken By	REAR AXLE: Torque Taken By	RUNNING GEAR: Brakes Hand Type & Location	RUNNING GEAR: Brakes Hand Application	RUNNING GEAR: Brakes Foot Type & Location	RUNNING GEAR: Steering Gear Type	RUNNING GEAR: Chassis Lubrication	RUNNING GEAR: Wheels Type
GERMAN																																						
Adler 6-22	104	51	30 x4	4-2$\frac{5}{8}$x4$\frac{5}{16}$	95	2200	22	Int.	L.	4	Sep.	Al.	CC.	Chai.	PrCs.	W.	ThS.	Pal.	P.	Bos.	M.	12	Yes.	Yes.	Co.	Sep.	3	Met.	$\frac{3}{4}$Fl.	ST.	TT.	TT.	ITr.	Rod.	ERw.	WW.	GC.	W.
Adler 9-30	122	53	32$\frac{1}{4}$x4$\frac{3}{4}$	4-3$\frac{1}{8}$x4$\frac{5}{8}$	141	2500	30	Int.	L.	4	Sep.	Al.	CC.	Chai.	PrCs.	W.	Pum.	Pal.	V.	Bos.	M.	12	Yes.	Yes.	Co.	Eng.	4	Met.	$\frac{3}{4}$Fl.	ST.	TT.	TT.	ETr.	Rod.	ERw.	SN.	GC.	W.
Adler 12-40	134	55	34$\frac{3}{4}$x5$\frac{1}{4}$	4-3$\frac{3}{8}$x5$\frac{5}{16}$	191	2000	40	Int.	L.	2	Sep.	Al.	CC.	Spur.	PrCs.	W.	Pum.	Pal.	V.	Bos.	M.	12	Yes.	Yes.	Co.	Sep.	4	Met.	$\frac{3}{4}$Fl.	Sp.	TT.	TT.	ETr.	Rod.	IRw.	SN.	GC.	W.
Adler 18-60	134	55	36$\frac{3}{4}$x5$\frac{1}{4}$	4-3$\frac{15}{16}$x5$\frac{15}{16}$	288	2000	60	Int.	L.	2	Sep.	Al.	CC.	Spur.	PrCs.	W.	Pum.	Pal.	V.	Bos.	M.	12	Yes.	Yes.	Co.	Sep.	4	Met.	$\frac{3}{4}$Fl.	Sp.	TT.	TT.	ETr.	Rod.	IRw.	SN.	GC.	W.
Aga C	100$\frac{3}{8}$	45$\frac{1}{4}$	30 x4	4-2$\frac{1}{2}$x4$\frac{5}{16}$	86	2400	20	Int.	L.	4	Sep.	Al.	CC.	Heli.	PrCs.	W.	ThS.	Sol.	V.	Bos.	M.	12	Yes.	Yes.	Co.	Eng.	3	Fab.	$\frac{3}{4}$Fl.	Sp.	SP.	SP.	ETr.	Rod.	IRw.	WW.	OC.	H.
Alfi 5-17	98$\frac{1}{2}$	43$\frac{3}{8}$	28 x3$\frac{1}{2}$	4-2$\frac{9}{16}$x3$\frac{7}{8}$	80	2200	17	Int.	L.	4	Sep.	Al.	CC.	Spur.	SpPr.	W.	ThS.	Sol.	G.	Bos.	M.	12	Yes.	Yes.	Co.	Eng.	3	Met.	$\frac{1}{2}$Fl.	ST.	SP.	TT.	IRw.	Rod.	IRw.	WW.	GC.	A.
Apollo 4-14	80$\frac{3}{8}$	43$\frac{3}{8}$	26 x3	4-2$\frac{3}{8}$x3$\frac{5}{8}$	64	2000	14	Int.	I.	4	Sep.	Al.	CC.	Spur.	Splash.	W.	ThS.	Opt.	G.	Eis.	M.	12	Yes.	Yes.	Co.	Sep.	3	Met.	$\frac{3}{4}$Fl.	ST.	SP.	SP.	ETr.	Rod.	IRw.	Pl.	GC.	A.
Apollo 10-40	126	51$\frac{1}{4}$	32$\frac{1}{4}$x4$\frac{3}{4}$	4-3$\frac{1}{4}$x4$\frac{7}{8}$	156	2000	30	Int.	L.	4	Sep.	Al.	CC.	Spur.	SpPr.	W.	ThS.	Opt.	P.	Bos.	B.	12	Yes.	Yes.	Co.	Sep.	4	Met.	$\frac{3}{4}$Fl.	ST.	RR.	SP.	ETr.	Rod.	IRw.	WS.	GC.	H.
Audi G8-28	117$\frac{1}{2}$	49$\frac{1}{4}$	32$\frac{1}{4}$x4$\frac{3}{4}$	4-2$\frac{15}{16}$x4$\frac{5}{8}$	128	2200	28	Int.	L.	4	Sep.	CI.	CC.	Heli.	PrCs.	W.	ThS.	Zen.	P.	Bos.	M.	12	Yes.	Yes.	Co.	Eng.	4	Met.	$\frac{1}{2}$Fl.	Sp.	TT.	TT.	ETr.	Cab.	IRw.	SN.	GC.	W.
Audi K14-50	138$\frac{7}{8}$	57$\frac{1}{8}$	35$\frac{1}{4}$x5$\frac{1}{4}$	4-3$\frac{9}{16}$x5$\frac{1}{2}$	217	2200	50	Det.	I.	4	Sep.	Al.	OH.	Heli.	PrCs.	W.	ThS.	Zen.	P.	Bos.	M.	12	Yes.	Yes.	MD.	Eng.	4	Met.	$\frac{1}{2}$Fl.	Sp.	TT.	TT.	ETr.	Cab.	IRw.	SN.	GC.	W.
Audi 18-70	144$\frac{7}{8}$	57$\frac{1}{8}$	35$\frac{1}{4}$x5$\frac{1}{4}$	6-3$\frac{9}{16}$x4$\frac{11}{16}$	280	2500	70	Det.	I.	6	Sep.	Al.	OH.	Heli.	PrCs.	W.	Pum.	Zen.	P.	Bos.	B.	12	Yes.	Yes.	MD.	Eng.	4	Met.	$\frac{1}{2}$Fl.	Sp.	TT.	TT.	IFW.	Cab.	IFW.	WW.	GC.	D.
Baer Two-cycle	94$\frac{1}{2}$	51$\frac{1}{4}$	28 x4	2-2$\frac{3}{4}$x4	47	2800	18	Det.	V.	2	Sep.	CI.	No.	......	PrCs.	W.	ThS.	Sol.	V.	Opt.	M.	12	Yes.	Yes.	MO.	Eng.	4	Met.	$\frac{1}{2}$Fl.	ST.	TT.	TT.	IRw.	Cab.	IRw.	WW.	PG.	A.
Beckmann 8-24	122	53$\frac{1}{8}$	32$\frac{1}{8}$x4$\frac{1}{8}$	4-3 x4$\frac{5}{16}$	122	1800	24	Int.	L.	4	Sep.	CI.	CC.	Spur.	FlPr.	W.	ThS.	Zen.	V.	Bos.	M.	12	Yes.	Yes.	Co.	Sep.	4	Met.	$\frac{3}{4}$Fl.	ST.	RR.	SP.	ETr.	Rod.	IRw.	WS.	GC.	A.
Beckmann 10-30	131	55$\frac{1}{8}$	32$\frac{1}{4}$x4$\frac{3}{4}$	4-3$\frac{1}{4}$x4$\frac{3}{4}$	155	1800	30	Int.	L.	4	Sep.	CI.	CC.	Spur.	FlPr.	W.	ThS.	Zen.	V.	Bos.	M.	12	Yes.	Yes.	Co.	Sep.	4	Met.	$\frac{3}{4}$Fl.	ST.	RR.	SP.	ETr.	Rod.	IRw.	WS.	GC.	A.
Benz 10-30	123	53$\frac{1}{8}$	32$\frac{1}{4}$x4$\frac{3}{4}$	4-3$\frac{1}{8}$x5$\frac{1}{8}$	159	2250	34	Int.	L.	4	Sep.	CI.	CC.	Chai.	PrCs.	W.	ThS.	Zen.	V.	Bos.	M.	12	Yes.	Yes.	Co.	Sep.	4	Met.	$\frac{1}{2}$Fl.	ST.	TA.	TT.	ITr.	Rod.	IRw.	SN.	GC.	A.
Benz 11-40	129$\frac{1}{2}$	53$\frac{1}{8}$	32$\frac{1}{4}$x4$\frac{3}{4}$	6-2$\frac{7}{8}$x4$\frac{5}{8}$	248	2200	40	Int.	L.	6	Sep.	CI.	CC.	Chai.	PrCs.	W.	ThS.	Zen.	V.	Bos.	M.	12	Yes.	Yes.	Co.	Sep.	4	Met.	$\frac{1}{2}$Fl.	ST.	TA.	TT.	ITr.	Rod.	IRw.	SN.	GC.	A.
Benz 16-50	137	55$\frac{7}{8}$	34$\frac{3}{4}$x5$\frac{1}{4}$	6-2$\frac{13}{16}$x4$\frac{1}{8}$	176	1950	50	Int.	L.	3	Sep.	CI.	CC.	Chai.	PrCs.	W.	Pum.	Zen.	V.	Bos.	M.	12	Yes.	Yes.	Co.	Sep.	4	Met.	$\frac{3}{4}$Fl.	ST.	TA.	TT.	ITr.	Rod.	IRw.	SN.	GC.	A.
Benz 27-70	144	56$\frac{5}{8}$	36$\frac{3}{4}$x5$\frac{1}{4}$	6-3$\frac{15}{16}$x5$\frac{15}{16}$	432	1550	72	Int.	L.	2	Sep.	CI.	CC.	Chai.	PrCs.	W.	Pum.	Zen.	V.	Bos.	M.	12	Yes.	Yes.	Co.	Sep.	4	Met.	$\frac{3}{4}$Fl.	ST.	TA.	TT.	ETr.	Rod.	IRw.	SN.	GC.	A.
Benz Soehne 8-25	119	51$\frac{1}{4}$	32$\frac{1}{8}$x4$\frac{1}{8}$	4-2$\frac{15}{16}$x4$\frac{3}{4}$	128	2100	30	Int.	L.	4	Sep.	CI.	CC.	Chai.	PrCs.	W.	ThS.	Zen.	V.	Bos.	M.	12	Yes.	Yes.	Co.	Sep.	4	Met.	$\frac{3}{4}$Fl.	ST.	RR.	TT.	ETr.	Rod.	IRw.	SN.	GC.	A.
Benz Soehne 14-42	127	53$\frac{5}{8}$	34$\frac{3}{4}$x4$\frac{3}{4}$	4-3$\frac{9}{16}$x5$\frac{1}{2}$	217	1900	45	Int.	L.	2	Sep.	CI.	CC.	Heli.	PrCs.	W.	ThS.	Zen.	V.	Bos.	M.	12	Yes.	Yes.	Co.	Sep.	4	Met.	$\frac{3}{4}$Fl.	ST.	RR.	TT.	ETr.	Rod.	IRw.	SN.	GC.	A.
B.F. Two-Cycle III	110$\frac{1}{4}$	47$\frac{1}{4}$	28 x4	3-2$\frac{3}{8}$x4	51	3000	20	Int.	V.	3	Int.	Al.	No.	......	MOF.	W.	ThS.	Pal.	G.	Tri.	B.	12	Yes.	Yes.	MO.	Sep.	3	Met.	$\frac{1}{2}$Fl.	ST.	TT.	TT.	IRw.	Cab.	IRw.	WS.	GC.	W.
B.F. Two-Cycle III A	110$\frac{1}{4}$	47$\frac{1}{4}$	30 x4	3-2$\frac{5}{8}$x4	62	3000	26	Int.	V.	3	Int.	Al.	No.	......	MOF.	W.	ThS.	Pal.	G.	Tri.	B.	12	Yes.	Yes.	MO.	Sep.	3	Met.	$\frac{1}{2}$Fl.	ST.	TT.	TT.	IRw.	Cab.	IRw.	WS.	GC.	W.
B.F. Two-Cycle IV	118$\frac{1}{4}$	47$\frac{1}{4}$	32 x4$\frac{1}{8}$	6-2$\frac{5}{16}$x3$\frac{15}{16}$	99	3000	40	Int.	V.	3	Int.	Al.	No.	......	MOF.	W.	ThS.	Pal.	G.	Tri.	B.	12	Yes.	Yes.	MO.	Sep.	3	Met.	$\frac{1}{2}$Fl.	ST.	TT.	TT.	IRw.	Cab.	IRw.	WS.	GC.	W.
Bob 5-20	90	44	28 x3$\frac{1}{2}$	4-2$\frac{1}{2}$x4	76	2800	20	Int.	L.	4	Sep.	CI.	CC.	Spur.	SpPr.	W.	ThS.	Pal.	G.	S&H.	M.	....	Opt.	Opt.	Co.	Sep.	3	Met.	$\frac{3}{4}$Fl.	ST.	TT.	TT.	ITr.	Rod.	IRw.	WS.	OC.	W.
Brennabor P	124$\frac{3}{4}$	53$\frac{1}{8}$	32 x4$\frac{1}{8}$	4-3$\frac{1}{8}$x4$\frac{1}{8}$	128	2400	24	Int.	L.	4	Sep.	CI.	CC.	Spur.	PrCs.	W.	ThS.	Zen.	P.	Bos.	M.	12	Yes.	Yes.	Co.	Sep.	4	Met.	$\frac{3}{4}$Fl.	ST.	TA.	TT.	ITr.	Rod.	IRw.	WW.	GC.	A.
Brennabor S	102$\frac{3}{4}$	50$\frac{3}{8}$	30 x4	4-2$\frac{3}{4}$x4	96	2200	20	Det.	I.	4	Int.	CI.	OH.	Spur.	PrCs.	W.	Pum.	Pal.	G.	Bos.	M.	12	Yes.	Yes.	SP.	Eng.	3	Met.	$\frac{3}{4}$Fl.	ST.	TT.	TT.	ERw.	Rod.	IRw.	SN.	GC.	A.
Club 5-18	108$\frac{1}{4}$	44$\frac{1}{2}$	28 x4	4-2$\frac{9}{16}$x3$\frac{7}{8}$	79	2500	18	Int.	L.	4	Sep.	Al.	CC.	Spur.	SpPr.	W.	ThS.	Kie.	G.	S&H.	M.	6	Yes.	Yes.	Co.	Eng.	3	Met.	$\frac{1}{2}$Fl.	ST.	TT.	TT.	IRw.	Cab.	IRw.	WS.	GC.	W.
Cyclonette Three-Wheel	98$\frac{1}{2}$	45$\frac{1}{4}$	28 x4$\frac{1}{8}$	2-3$\frac{1}{4}$x4$\frac{3}{4}$	70	1800	10	Int.	L.	1	Sep.	CI.	CC.	Spur.	Splash.	A.	......	Zef.	P.	Bos.	M.	....	Opt.	Opt.	Co.	Eng.	2	......	......	......	......	......	ERw.	Rod.	IRw.	Ba.	GC.	W.
Denn	90	45$\frac{1}{2}$	28 x3	1-3$\frac{3}{8}$x4$\frac{1}{8}$	37	2000	8	Int.	L.	1	Sep.	CI.	CC.	Spur.	Splash.	A.	......	Pal.	G.	Bos.	M.	....	No.	No.	Co.	Eng.	3	Fab.	$\frac{1}{2}$Fl.	ST.	SP.	SP.	ERw.	Rod.	IRw.	WS.	GC.	W.
Diabolo Three-wheel	86$\frac{3}{4}$	42	26 x3	2-3$\frac{1}{4}$x4$\frac{1}{16}$	67	2000	10	Int.	F.	Vee.	Int.	CI.	CC.	Spur.	SpPr.	W.	ThS.	Sch.	G.	Bos.	M.	12	Yes.	No.	Co.	RA.	2	No.	......	Ch.	......	......	ERw.	Rod.	ERw.	Ca.	GC.	W.
Diabolo Three-wheel	86$\frac{3}{4}$	45	26 x3	2-3$\frac{1}{4}$x4$\frac{1}{16}$	67	2800	15	Int.	F.	Vee.	Int.	Al.	CC.	Spur.	SpPr.	W.	ThS.	Sch.	G.	Bos.	M.	12	Yes.	No.	Co.	RA.	2	No.	......	Ch.	......	......	ERw.	Rod.	ERw.	Ca.	GC.	W.
Dinos 8-35	116	49$\frac{1}{4}$	32 x4$\frac{1}{8}$	4-3$\frac{1}{16}$x4$\frac{1}{4}$	126	2200	35	Det.	I.	4	Int.	Al.	OH.	Heli.	FlPr.	W.	Pum.	Pal.	P.	Tri.	B.	12	Yes.	Yes.	Co.	Eng.	4	Met.	$\frac{3}{4}$Fl.	Sp.	TT.	SP.	ETr.	Rod.	IRw.	SN.	GC.	W.
Dinos 16-45	129$\frac{1}{2}$	55$\frac{1}{8}$	34$\frac{3}{4}$x4$\frac{3}{4}$	4-3$\frac{3}{4}$x5$\frac{11}{16}$	245	2000	45	Int.	F.	2	Sep.	Al.	CC.	Chai.	FlPr.	W.	Pum.	Pal.	V.	Bos.	M.	12	Yes.	Yes.	Co.	Sep.	4	Met.	$\frac{3}{4}$Fl.	Sp.	TT.	SP.	ETr.	Rod.	IRw.	SN.	GC.	W.
Dixi 6-24	112$\frac{1}{4}$	44$\frac{5}{8}$	30 x4	4-2$\frac{3}{4}$x4	96	2200	24	Int.	L.	4	Sep.	Al.	CC.	Chai.	PrCs.	W.	ThS.	Opt.	V.	Bos.	M.	12	Yes.	Yes.	Co.	Sep.	4	Met.	$\frac{3}{4}$Fl.	Sp.	TT.	TT.	ITr.	Rod.	IRw.	SN.	GC.	W.
Dixi 13-39	126	53$\frac{1}{8}$	32$\frac{1}{4}$x4$\frac{3}{4}$	4-3$\frac{3}{4}$x4$\frac{3}{4}$	208	1500	39	Int.	L.	2	Sep.	CI.	CC.	Spur.	PrCs.	W.	Pum.	Opt.	V.	Bos.	M.	12	Yes.	Yes.	Co.	Sep.	4	Met.	$\frac{3}{4}$Fl.	Sp.	TT.	TT.	ETr.	Rod.	IRw.	SN.	GC.	A.
Dixi 20-55	144	56$\frac{1}{8}$	36$\frac{3}{4}$x5$\frac{1}{4}$	4-3$\frac{15}{16}$x6$\frac{1}{2}$	316	1800	55	Int.	L.	4	Sep.	Al.	CC.	Chai.	PrCs.	W.	Pum.	Opt.	V.	Bos.	M.	12	Yes.	Yes.	Co.	Sep.	4	Met.	$\frac{3}{4}$Fl.	Sp.	TT.	TT.	ITr.	Rod.	IRw.	WW.	GC.	A.
Duerkopp P8A	114$\frac{3}{4}$	49$\frac{1}{4}$	32 x4$\frac{1}{8}$	4-3$\frac{3}{16}$x3$\frac{15}{16}$	127	2500	32	Int.	L.	4	Sep.	Al.	CC.	Heli.	PrCs.	W.	ThS.	Opt.	V.	Bos.	M.	12	Yes.	Yes.	SP.	Eng.	4	Fab.	$\frac{3}{4}$Fl.	Sp.	TT.	TT.	ETr.	Rod.	IRw.	WS.	GC.	A.
Duerkopp P12	135$\frac{1}{2}$	53$\frac{1}{8}$	32$\frac{1}{4}$x4$\frac{3}{4}$	6-3$\frac{3}{16}$x3$\frac{15}{16}$	190	2500	50	Int.	L.	6	Sep.	Al.	CC.	Heli.	PrCs.	W.	ThS.	Opt.	V.	Bos.	M.	12	Yes.	Yes.	SP.	Eng.	4	Fab.	$\frac{3}{4}$Fl.	Sp.	TT.	TT.	ETr.	Rod.	IRw.	WS.	GC.	A.
Dux S	138	55	35$\frac{1}{4}$x5$\frac{1}{4}$	4-3$\frac{15}{16}$x5$\frac{1}{2}$	268	1800	50	Int.	L.	4	Sep.	Al.	CC.	Chai.	SpPr.	W.	Pum.	Zen.	P.	Bos.	M.	12	Yes.	Yes.	Co.	Sep.	4	Met.	$\frac{3}{4}$Fl.	Sp.	TT.	TT.	ETr.	Rod.	IRw.	SN.	OC.	A.
Dux R	138	55	35$\frac{1}{4}$x5$\frac{1}{4}$	6-3$\frac{1}{4}$x5$\frac{1}{2}$	272	1800	50	Int.	L.	6	Int.	Al.	CC.	Heli.	PrCs.	W.	Pum.	Spe.	P.	Bos.	M.	12	Yes.	Yes.	SP.	Sep.	4	Met.	$\frac{3}{4}$Fl.	Sp.	TT.	TT.	EFW.	Rod.	IRw.	SN.	OC.	A.
Ego	100$\frac{3}{4}$	46$\frac{1}{2}$	28 x3$\frac{1}{2}$	4-2$\frac{9}{16}$x3$\frac{1}{16}$	62	2600	14	Det.	L.	4	Int.	CI.	CC.	Spur.	FlPr.	W.	ThS.	Sol.	G.	Opt.	M.	12	Yes.	Yes.	Co.	Sep.	3	Fab.	$\frac{1}{2}$Fl.	Sp.	SP.	SP.	ETr.	Rod.	IRw.	WS.	OC.	W.
Ehrhardt L	124	53$\frac{1}{8}$	32$\frac{1}{4}$x5$\frac{1}{4}$	6-3$\frac{1}{8}$x5$\frac{1}{8}$	240	2200	60	Det.	I.	2	Sep.	Al.	CC.	Heli.	PrCs.	W.	Pum.	Pal.	V.	Bos.	M.	12	Yes.	Yes.	MO.	Sep.	4	Fab.	$\frac{1}{2}$Fl.	Sp.	TT.	TT.	ETr.	Rod.	IRw.	SN.	GC.	W.
Ehrhardt KA	100$\frac{1}{2}$	42	27$\frac{1}{2}$x3$\frac{1}{8}$	4-2$\frac{5}{16}$x3$\frac{9}{16}$	61	2850	22	Det.	L.	4	Sep.	Al.	CC.	Spur.	Splash.	W.	ThS.	Sol.	G.	Bos.	M.	12	Yes.	Yes.	SP.	Eng.	3	Fab.	$\frac{1}{2}$Fl.	Sp.	SP.	SP.	IRw.	Rod.	IRw.	WW.	GC.	W.
Elitewagen BIV	126	55$\frac{1}{4}$	32$\frac{1}{4}$x4$\frac{3}{4}$	4-3$\frac{3}{8}$x5$\frac{1}{2}$	194	1500	35	Int.	L.	4	Sep.	CI.	CC.	Heli.	SpPr.	W.	Pum.	Zen.	V.	Bos.	M.	12	Yes.	Yes.	Co.	Eng.	4	Met.	$\frac{3}{4}$Fl.	Sp.	TT.	TT.	ETr.	Rod.	IRw.	SN.	GC.	W.
Elitewerke E12	134	55$\frac{1}{8}$	32$\frac{1}{4}$x4$\frac{3}{4}$	4-3$\frac{5}{16}$x5$\frac{1}{2}$	194	2000	40	Int.	L.	4	Sep.	Al.	CC.	Chai.	SpPr.	W.	Pum.	Zen.	V.	Bos.	M.	12	Yes.	Yes.	MO.	Sep.	4	Met.	$\frac{3}{4}$Fl.	ST.	TT.	TT.	ETr.	Rod.	IRw.	SN.	GC.	A.
Elitewerke E15	137$\frac{3}{4}$	55$\frac{1}{8}$	34$\frac{3}{4}$x5$\frac{1}{4}$	4-3$\frac{9}{16}$x5$\frac{15}{16}$	233	2000	50	Int.	L.	4	Sep.	Al.	CC.	Chai.	SpPr.	W.	Pum.	Zen.	V.	Bos.	M.	12	Yes.	Yes.	MO.	Sep.	4	Met.	$\frac{3}{4}$Fl.	ST.	TT.	TT.	ETr.	Rod.	IRw.	SN.	GC.	A.
Elitewerke S18	144	55$\frac{1}{8}$	34$\frac{3}{4}$x5$\frac{1}{4}$	6-3$\frac{5}{16}$x5$\frac{1}{2}$	230	2400	55	Int.	L.	6	Sep.	Al.	CC.	Chai.	SpPr.	W.	Pum.	Zen.	V.	Bos.	M.	12	Yes.	Yes.	MO.	Sep.	4	Met.	$\frac{3}{4}$Fl.	ST.	TT.	TT.	EFW.	Rod.	IRw.	SN.	GC.	A.
Elitewerke E8	124	53$\frac{1}{8}$	32$\frac{1}{4}$x4$\frac{1}{8}$	4-2$\frac{15}{16}$x4$\frac{11}{16}$	125	2800	40	Det.	I.	4	Sep.	Al.	OH.	Chai.	PrCs.	W.	Pum.	Zen.	V.	Bos.	M.	12	Yes.	Yes.	MO.	Sep.	4	Met.	$\frac{3}{4}$Fl.	ST.	TT.	TT.	EFW.	Rod.	IRw.	WW.	GC.	W.
Exor N2	106$\frac{1}{4}$	47$\frac{1}{4}$	28 x3$\frac{1}{2}$	4-2$\frac{9}{16}$x3$\frac{7}{8}$	79	1800	16	Int.	I.	4	Sep.	Al.	CC.	Spur.	PrCs.	W.	ThS.	Sol.	V.	Bos.	M.	12	Yes.	Yes.	MO.	Sep.	3	Met.	$\frac{1}{2}$Fl.	ST.	TT.	TT.	IRw.	Rod.	IRw.	WS.	GC.	W.
Fadag 8-30	122	53$\frac{1}{8}$	32$\frac{1}{4}$x4$\frac{3}{4}$	4-3$\frac{3}{16}$x3$\frac{15}{16}$	124	3000	32	Int.	L.	4	Sep.	Al.	CC.	Chai.	PrCs.	W.	ThS.	Pal.	V.	Bos.	M.	12	Yes.	Yes.	MO.	Sep.	4	Met.	$\frac{3}{4}$Fl.	Sp.	TT.	TT.	IFW.	Rod.	IFW.	SN.	GC.	W.
Fadag 10-50	132	55$\frac{1}{8}$	32$\frac{1}{4}$x5$\frac{1}{4}$	6-2$\frac{3}{4}$x4$\frac{3}{8}$	158	3000	50	Det.	I.	6	Sep.	Al.	OH.	Heli.	SpPr.	W.	ThS.	Zen.	V.	Bos.	M.	12	Yes.	Yes.	MO.	Sep.	4	Met.	$\frac{3}{4}$Fl.	Sp.	TT.	TT.	IFW.	Rod.	IFW.	SN.	GC.	W.
Fadag 4120	90$\frac{1}{2}$	43$\frac{3}{8}$	28 x3$\frac{1}{2}$	4-2$\frac{1}{2}$x3$\frac{3}{16}$	63	3500	24	Int.	I.	4	Int.	Al.	OH.	Heli.	SpPr.	W.	ThS.	Sch.	G.	Bos.	M.	12	Yes.	Yes.	MO.	Eng.	4	Met.	$\frac{1}{2}$Fl.	Sp.	SP.	TT.	ERw.	Rod.	IRw.	WS.	GC.	H.
Fafnir 476	117$\frac{1}{2}$	51$\frac{1}{4}$	32 x4$\frac{1}{8}$	4-3 x4$\frac{15}{16}$	137	2800	30	Int.	L.	4	Sep.	Al.	CC.	Chai.	PrCs.	W.	ThS.	Opt.	G.	Bos.	M.	12	Yes.	Yes.	Co.	Eng.	4	Met.	$\frac{3}{4}$Fl.	Sp.	TT.	TT.	ITr.	Rod.	IRw.	WW.	GC.	D.
Fafnir 471	106$\frac{1}{4}$	49$\frac{1}{4}$	30 x3$\frac{1}{2}$	4-2$\frac{13}{16}$x4$\frac{15}{16}$	123	2800	50	Det.	L.	6	Int.	Al.	OH.	Chai.	FlPr.	W.	ThS.	Opt.	G.	Bos.	M.	12	Yes.	Yes.	Co.	Eng.	4	Met.	$\frac{3}{4}$Fl.	Sp.	TT.	TT.	ITr.	Rod.	IRw.	WW.	GC.	W.
Falcon CA6	110$\frac{1}{4}$	45$\frac{1}{4}$	28 x3$\frac{1}{2}$	4-2$\frac{11}{16}$x4$\frac{5}{16}$	95	2500	22	Int.	L.	4	Sep.	Al.	CC.	Heli.	SpPr.	W.	ThS.	Sol.	G.	Bos.	M.	12	Yes.	Yes.	MO.	Eng.	4	Met.	$\frac{1}{2}$Fl.	ST.	SP.	RR.	ETr.	Rod.	ERw.	WS.	GC.	H.
Falcon CA8	118$\frac{1}{4}$	47$\frac{1}{4}$	30 x4	6-2$\frac{11}{16}$x3$\frac{1}{16}$	122	3000	40	Det.	I.	6	Int.	Al.	OH.	Heli.	SpPr.	W.	Pum.	Sol.	G.	Eis.	M.	12	Yes.	Yes.	MO.	Eng.	4	Met.	$\frac{1}{2}$Fl.	ST.	SP.	RR.	ETr.	Rod.	ERw.	WS.	GC.	H.
Faun 6-24	111	47$\frac{1}{4}$	30 x4	4-2$\frac{1}{2}$x4$\frac{5}{16}$	87	2400	24	Det.	I.	4	Int.	Al.	OH.	Heli.	SpPr.	W.	ThS.	Sol.	G.	Lum.	B.	6	Yes.	Yes.	SP.	Eng.	3	Met.	$\frac{1}{2}$Fl.	Sp.	TT.	TT.	IRw.	Rod.	IRw.	WW.	GC.	D.
Freia S5	78$\frac{3}{4}$	43$\frac{3}{8}$	28 x3$\frac{1}{2}$	4-2$\frac{1}{2}$x3$\frac{15}{16}$	78	2150	14	Int.	L.	4	Sep.	Al.	CC.	Chai.	SpPr.	W.	ThS.	Sol.	G.	Bos.	M.	12	Yes.	Yes.	Co.	Sep.	3	Met.	$\frac{1}{2}$Fl.	Sp.	TT.	TT.	ETr.	Rod.	IRw.	WS.	GC.	W.
Fulmina 10-30	126	49$\frac{1}{4}$	32$\frac{1}{4}$x4$\frac{3}{4}$	4-3$\frac{1}{8}$x5$\frac{1}{8}$	159	2400	36	Int.	L.	4	Sep.	Al.	CC.	Chai.	PrCs.	W.	ThS.	Pal.	V.	Bos.	M.	12	Yes.	Yes.	MO.	Sep.	4	Met.	$\frac{3}{4}$Fl.	ST.	RR.	TT.	ITr.	Rod.	ERw.	SN.	GC.	W.
Fulmina 16-50	135$\frac{7}{8}$	53$\frac{1}{8}$	34$\frac{3}{4}$x5$\frac{1}{4}$	4-3$\frac{15}{16}$x5$\frac{1}{8}$	249	2400	60	Int.	L.	4	Sep.	Al.	CC.	Chai.	PrCs.	W.	ThS.	Pal.	V.	Eis.	M.	12	Yes.	Yes.	Co.	Sep.	4	Met.	$\frac{3}{4}$Fl.	ST.	RR.	TT.	ETr.	Rod.	ERw.	SN.	GC.	H.

Grade...... Two-cycle	112	39⅜	28 x3½	2–2¾x4⅛	49	1800	16	Int..	V...	1	Sep.	Al..	No..		SpPr...	A..	......	Own..	G...	Bos...	M..	...	Opt.	Opt.	No...	Sep...	F...	......	......	Ch..	SP..	SP..	IRw..	Rod...	ETr...	Ca...	GC...	D...
Gridi...... 3-15	102½	39⅜	28 x3½	1–3¼x6⅞	52	1900	15	Det.	I...	1	Sep.	Al..	OH.	Bevel.	SpPr...	W..	ThS...	Sol...	G...	Bos...	M..	6	Yes.	Yes.	No...	Sep...	F...	......	......	Ch..	SP..	SP..	ERw..	Cab...	IRw..	Pl...	GC...	D...
HAG...... 5-18	118½	47¼	28 x3½	4–2½x4	79	3000	18	Int..	I...	4	Sep.	Al..	OH.	Bevel.	FlPr...	W..	ThS...	Opt...	G...	Opt...	M..	...	Opt.	Opt.	MO...	Eng...	3	Met...	½Fl..	ST..	SP..	TT.	ERw..	Rod...	IRw..	SN...	GC...	W..
HAG...... 8-40	122	49¼	32¼x5¼	6–2⅝x3⅞	122	3000	40	Int..	I...	6	Sep.	Al..	OH.	Bevel.	FlPr...	W..	ThS...	Opt...	P...	Opt...	M..	...	Opt.	Opt.	MO...	Eng...	4	Met...	½Fl..	CT..	SP..	TT.	ERw..	Rod...	IRw..	SN...	GC...	W..
Hagea......	110	39⅜	26 x3	2–2¾x3 9/16	47	2200	12	Int..	V...	1	Sep.	Al..	No..	......	SpPr...	A..	......	Sol...	G...	Bos...	M..	...	Opt.	...	No...	Sep...	F...		......	Ch..	SP..	SP..	ERw..	Cab...	IRw..	WW..	GC...	D...
Hansa...... 8-36	118¼	51¼	32 x4¾	4–3⅛x4 5/16	126	3600	36	Int..	L...	4	Sep.	Al..	CC.	Chai..	PrCs...	W..	ThS...	Pal...	V...	Opt...	M..	12	Yes.	Yes.	MD...	Sep...	4	Fab...	¾Fl..	Wo.	SP..	SP..	ITr...	Rod...	IRw..	SN...	GC...	H...
Hansa-Lloyd...... H	150	55¾	35¾x5¼	4–4⅛x5⅛	276	2200	65	Int..	L...	4	Sep.	Al..	CC.	Chai..	PrCs...	W..	ThS...	Pal...	V...	Bos...	M..	12	Yes.	Yes.	MD...	Sep...	4	Met...	¾Fl..	Sp..	TT.	TT.	ETr...	Rod...	IRw..	SN...	GC...	H...
Hansa-Lloyd...... 16-80	141	57⅛	36¾x5¼	8–2⅞x5⅛	268	2200	80	Det.	I...	8	Int..	Al..	OH.	Bevel.	PrCs...	W..	ThS...	Pal...	V...	Bos...	M..	12	Yes.	Yes.	SP...	Eng...	4	Fab...	FF...	Sp..	SP..	SP..	IFW..	Cab...	IFW..	SN...	GC...	H...
Hataz...... A	90½	47¼	28 x3½	4–2⅜x3⅝	64	2000	14	Int..	L...	4	Sep.	Al..	CC.	Heli...	SpPr...	W..	ThS...	Zen...	V...	Bos...	M..	12	Yes.	Yes.	Co...	Eng...	3	Met...	½Fl..	ST..	TT.	TT.	IRw..	Rod...	IRw..	SN...	GC...	W..
Heim...... 2-40	118¼	53⅛	32 x4⅛	4–3 5/16x3 15/16	128	2800	46	Int..	L...	4	Sep.	Al..	CC.	Chai..	FlPr...	W..	ThS...	Sol...	G...	Bos...	M..	12	Yes.	Yes.	Co...	Sep...	3	Fab...	¾Fl..	ST..	SP..	TT.	ITr...	Rod...	IRw..	WS...	GC...	A...
Hildebrand......	106¼	45½	28 x4	4–2⅝x3⅞	79	1900	17	Int..	L...	4	Sep.	Al..	CC.	Chai..	SpPr...	W..	ThS...	Zen...	V...	Eis...	M..	12	Yes.	Yes.	Co...	Sep...	4	Met...	½Fl..	ST..	SP..	RR.	ETr...	Rod...	IRw..	SN...	GC...	W..
Horch...... 10M20	126	54⅜	32¼x4¾	4–3⅛x5⅛	159	2200	35	Int..	L...	4	Sep.	Al..	CC.	Heli...	FlPr...	W..	Pum..	Zen...	V...	Bos...	M..	12	Yes.	Yes.	MO...	Eng...	4	Met...	¾Fl..	Sp..	TT.	TT.	IFW..	Rod...	IFW..	WS...	OC...	H...
Horch...... 10M21	126	54⅜	32¼x4¾	4–3⅛x5⅛	159	2200	45	Det.	I...	4	Int..	Al..	OH.	Bevel.	FlPr...	W..	Pum..	Zen...	V...	Bos...	M..	12	Yes.	Yes.	MO...	Eng...	4	Met...	......	Sp..	TT.	TT.	IFW..	Rod...	IFW..	WS...	OC...	H...
Horch...... 15M21	144	54⅜	34¾x5¼	6–3⅛x5⅛	239	2300	65	Det.	I...	6	Int..	Al..	OH.	Bevel.	FlPr...	W..	Pum..	Zen...	V...	Bos...	M..	12	Yes.	Yes.	MO...	Eng...	4	Met...	¾Fl..	Sp..	TT.	TT.	IFW..	Rod...	IFW..	WS...	OC...	W..
Induhag... Three-wheel	90	45¼	20 x2	1–2½x3⅛	15	1600	3	Int..	L...	1	Sep.	CI..	CC.	Spur..	SpPr...	A..	......	Ein...	G...	Opt...	M..	...	No..	No..	Co...	Sep...	2	No...	......	Ch..	SP..	SP..	ETr...	Rod...	IRw..	Ba...	GC...	W..
Induhag... Three-wheel	90	47¼	22 x2	2–2½x3⅛	30	1500	5	Int..	L...	2	Sep.	CI..	CC.	Spur..	SpPr...	A..	......	Mea...	G...	Opt...	M..	...	No..	No..	Co...	Sep...	2	No...	......	Ch..	SP..	SP..	ETr...	Rod...	IRw..	Ba...	GC...	W..
Joswin...... 28-95	157½	59⅞	36¾x6	6–4⅛x5½	444	1400	95	Int..	I...	2	Sep.	Al..	OH.	Bevel.	FlPr...	W..	Pum..	Pal...	V...	Bos...	M..	12	Yes.	Yes.	MO...	Sep...	4	Met...	¾Fl..	ST..	TT.	TT.	EFW..	Rod...	IFW..	SN...	GC...	W..
Koco...... 4-16	94½	45⅝	28 x3½	2–3⅜x3 9/16	62	2500	16	Int..	H...	1	Sep.	Al..	CC.	Spur..	SpPr...	W..	ThS...	Opt...	G...	UH...	M..	12	Yes.	Yes.	SP...	Sep...	2	......	......	Ch..	RR.	RR.	IRw..	Rod...	IRw..	Ca...	GC...	A...
Koco...... 5-30	94½	45⅝	28 x3½	2–3 11/16x3 11/16	79	3300	30	Int..	H...	1	Sep.	Al..	CC.	Spur..	SpPr...	W..	ThS...	Opt...	G...	Bos...	M..	12	Yes.	Yes.	SP...	Sep...	2	......	......	Ch..	RR.	RR.	IRw..	Rod...	IRw..	Ca...	GC...	A...
Koerting...... F.B.D.	114¼	51¼	32 x4⅛	4–2¾x3 15/16	96	2550	28	Int..	L...	4	Sep.	Al..	CC.	Chai..	SpPr...	W..	ThS...	Opt...	G...	Bos...	M..	12	Yes.	Yes.	SP...	Eng...	3	Fab...	½Fl..	Sp..	RR.	TT.	ITr...	Rod...	IRw..	SN...	GC...	A...
Koerting...... H.C.B.	114¼	51¼	32¼x4¾	4–3 5/16x3 15/16	127	2550	36	Int..	L...	4	Sep.	Al..	CC.	Chai..	SpPr...	W..	ThS...	Opt...	G...	Bos...	M..	12	Yes.	Yes.	SP...	Eng...	3	Fab...	½Fl..	Sp..	RR.	TT.	ITr...	Rod...	IRw..	SN...	GC...	A...
Komet...... H.B.2	98½	43⅜	28 x3½	4–2⅜x3 9/16	74	2200	14	Int..	L...	4	Sep.	Al..	CC.	Spur..	SpPr...	W..	ThS...	Zen...	G...	S&H...	M..	12	Yes.	Yes.	Co...	Eng...	3	Met...	½Fl..	Wo.	RR.	TT.	IRw..	Rod...	IRw..	SN...	GC...	D...
Komnick...... C2	126	53	32 x4¾	4–3 1/16x4¼	126	1800	30	Det.	I...	4	Int..	Al..	OH.	Heli...	PrCs...	W..	Pum..	Pal...	G...	Bos...	M..	12	Yes.	Yes.	SP...	Sep...	3	Fab...	¾Fl..	Sp..	TT.	TT.	ETr...	Rod...	IRw..	WS...	GC...	D...
Ley...... T6	104¾	44⅛	30 x4	4–2¾x3 15/16	94	2200	20	Int..	L...	4	Sep.	Al..	CC.	Spur..	SpPr...	W..	ThS...	Zen...	V...	Eis...	M..	12	Yes.	Yes.	MD...	Eng...	3	Met...	½Fl..	ST..	TT.	TT.	ITr...	Rod...	IRw..	SN...	GC...	H...
Ley...... U12	125	51¾	32¼x5	4–3 7/16x5⅛	183	2000	36	Int..	L...	4	Sep.	Al..	CC.	Spur..	SpPr...	W..	Pum..	Zen...	V...	Bos...	M..	12	Yes.	Yes.	MD...	Eng...	3	Met...	½Fl..	ST..	TT.	TT.	ITr...	Rod...	IRw..	WW..	GC...	W..
Lindcar...... K.A.C.4	98½	43⅜	28 x4	4–2⅜x3 9/16	62	2200	12	Int..	L...	4	Int..	Al..	CC.	Spur..	SpPr...	W..	ThS...	Pal...	G...	Opt...	M..	12	Yes.	Yes.	Co...	Sep...	3	Met...	½Fl..	ST..	TT.	TT.	ITr...	Rod...	IRw..	WS...	GC...	W..
Lindcar...... K.A.C.5	98½	43⅜	28 x4	4–2 9/16x3⅞	79	2200	15	Int..	L...	4	Int..	Al..	CC.	Spur..	SpPr...	W..	ThS...	Pal...	G...	Opt...	M..	12	Yes.	Yes.	Co...	Sep...	3	Met...	½Fl..	ST..	TT.	TT.	ITr...	Rod...	IRw..	WS...	GC...	W..
Lipsia......	102½	51¼	32 x4¾	4–2 9/16x4⅝	95	2400	20	Int..	L...	4	Sep.	CI..	CC.	Heli...	SpPr...	W..	ThS...	Zen...	V...	S&H..	M..	12	Yes.	Yes.	Co...	Eng...	3	Met...	½Fl..	Sp..	TT.	TT.	IRw..	Rod...	IRw..	SN...	GC...	W..
Luther & Heyer......	118½	43⅜	27½x3⅛	4–2⅜x3 9/16	62	2200	12	Int..	L...	4	Int.	CI..	CC.	Spur..	FlPr...	W..	ThS...	Zen...	G...	Eis...	M..	12	Yes.	Yes.	Co...	Sep...	3	Fab...	¾Fl..	Sp..	SP..	SP.	ETr..	Rod...	IRw..	WS...	GC...	W..
Magnet... Three-wheel	119	49	26 x3	4–2⅜x3⅛	56	2000	10	Int..	F...	1	Sep.	CI..	CC.	Spur..	SpPr...	A...	......	Zef...	P...	Bos..	M..	...	No..	No..	......	Eng...	2	No...	......	Ch..	......	......	ERw..	Cab...	IRw..	Ba...	OC...	W..
Magnet......	118	45	26 x3	4–2⅜x3⅛	56	2000	10	Int..	F...	1	Sep.	CI..	CC.	Spur..	SpPr...	A...	......	Zef...	G...	Bos..	M..	...	No..	No..	......	Eng...	2	......	......	Ch..	SP..	SP..	ERw..	Cab...	IRw..	Ca...	OC...	W..
Maja......	118	42	26 x2½	2–2 11/16x2 11/16	31	3000	6	Int..	H...	1	Sep.	Al..	CC.	Spur..	SpPr...	A...	......	Opt...	G...	Bos..	M..	...	Opt.	Opt.	Co...	Sep...	3	Fab..	½Fl..	Sp..	SP..	SP..	ERw..	Cab...	IRw..	Ca...	GC...	D...
Mannesmann...... 4-16	94½	47	28 x4	4–2⅜x3⅝	63	3000	16	Int..	L...	1	Sep.	Al..	CC.	Cnai..	SpPr...	W..	ThS...	Opt...	G...	Bos..	M..	12	Yes.	Yes.	Co...	Sep...	3	Met...	¾Fl..	Sp..	SP..	TT.	IRw..	Rod...	IRw..	WS...	GC...	W..
Mannesmann...... 5-20	94½	47	28 x4	4–2 11/16x3⅝	79	3000	20	Int..	L...	4	Sep.	Al..	CC.	Chai..	SpPr...	W..	ThS...	Opt...	G...	Bos..	M..	12	Yes.	Yes.	Co...	Sep...	3	Met...	¾Fl..	Sp..	SP..	TT.	IRw..	Rod...	IRw..	WS...	GC...	W..
Maybach......	144	58¼	35¼x5¼	6–3¾x5 5/16	350	2400	70	Int..	L...	6	Int..	CI..	CC.	Chai..	PrCs...	W..	Pum..	Own..	V...	Bos..	B..	12	Yes.	Yes.	Ex...	Eng...	2	Met...	¾Fl..	Sp..	TT.	TT.	IFW..	Rod...	IFW..	SN...	OC...	D...
Mercedes...... 6-25	106	45¼	30 x4	4–2 11/16x4¼	96	2800	25	Int..	I...	4	Sep.	Al..	OH.	Bevel.	PrCs...	W..	Pum..	Own..	P...	Bos..	M..	12	Yes.	Yes.	Co...	Sep...	4	Met...	¾Fl..	ST..	TT.	TT.	ETr...	Rod...	IRw..	SN...	OC...	W..
Mercedes...... 10-40	120	51	32¼x4¾	4–3 5/16x5⅛	162	2800	40	Int..	I...	4	Sep.	Al..	OH.	Bevel.	PrCs...	W..	Pum..	Own..	P...	Bos..	M..	12	Yes.	Yes.	Co...	Sep...	4	Met...	¾Fl..	ST..	TT.	TT.	ETr...	Rod...	IRw..	SN...	OC...	A...
Mercedes...... 28-95	132¾	53⅛	35¼x5¼	6–4⅛x5½	443	2800	95	Int..	I...	2	Sep.	Al..	OH.	Bevel.	PrCs...	W..	Pum..	Own..	P...	Bos..	M..	12	Yes.	Yes.	Co...	Sep...	4	Met...	¾Fl..	Sp..	TT.	TT.	EFW..	Rod...	IFW..	SN...	OC...	A...
Mercedes...... 16-45	125¾	53⅛	34¾x5¼	4–3 15/16x5⅛	249	1800	45	Det.	S...	2	Sep.	Al..	CC.	Spur..	PrCs...	W..	Pum..	Own..	P...	Bos..	M..	12	Yes.	Yes.	Co...	Sep...	4	Met...	¾Fl..	Sp..	TT.	TT.	ETr...	Rod...	IRw..	SN...	OC...	A...
Mikromobil......	100½	47½	30 x4	4–2 9/16x4⅝	96	2200	20	Int..	L...	4	Sep.	Al..	CC.	Spur..	SpPr...	W..	ThS...	Zen...	G...	S&H..	M..	6	Yes.	Yes.	Co...	Sep...	3	Met...	½Fl..	ST..	TT.	TT.	IRw..	Cab...	IRw..	WS...	GC...	A...
Minimus...... DT	94½	44¼	28 x3½	4–2⅜x3 9/16	62	2000	12	Int..	L...	4	Int..	CI..	CC.	Spur..	SpPr...	W..	ThS..	Pal...	G...	Mea..	M..	...	Opt.	Opt.	Co...	Sep...	3	Fab...	½Fl..	ST..	RR.	TT.	ITr...	Rod...	IRw..	WS...	GC...	W..
Moll...... M1	118¼	55⅛	30 x4	4–2¾x3 15/16	94	3000	30	Det.	I...	4	Int..	Al..	OH.	Heli...	SpPr...	W..	ThS...	Zen...	G...	S&H..	M..	12	Yes.	Yes.	Co...	Sep...	4	Met...	¾Fl..	Sp..	SP..	TT.	IRw..	Rod...	IRw..	WS...	OC...	A...
Moll...... M2	118¼	55⅛	32 x4⅛	4–2 13/16x4 13/16	122	2800	45	Det.	I...	4	Sep.	Al..	OH.	Spur..	SpPr...	W..	ThS...	Zen...	G...	Bos..	M..	12	Yes.	Yes.	Co...	Eng...	4	Met...	¾Fl..	Sp..	SP..	TT.	IRw..	Rod...	IRw..	WS...	OC...	A...
NAG...... C4	126	53⅛	32¼x4¾	4–3¼x4⅝	156	2100	30	Int..	L...	4	Sep.	CI..	CC.	Chai..	PrCs...	W..	ThS...	Zen...	V...	Bos..	M..	12	Yes.	Yes.	Co...	Sep...	4	Met...	¾Fl..	Sp..	RR.	TT.	ETr...	Rod...	IRw..	SN...	GC...	H...
NAG...... C41	126	53⅛	32¼x4¾	4–3¼x4⅝	156	2700	40	Int..	L...	4	Sep.	CI..	CC.	Spur..	PrCs...	W..	ThS...	Zen...	G...	Bos..	M..	12	Yes.	Yes.	Co...	Sep...	4	Met...	¾Fl..	Sp..	RR.	TT.	ETr...	Rod...	IRw..	SN...	GC...	W..
NAG...... D4	130	53⅛	32¼x4¾	4–3⅛x5⅜	159	2400	40	Det.	I...	4	Int..	CI..	OH.	Chai..	PrCs...	W..	Pum..	Zen...	V...	Bos..	M..	12	Yes.	Yes.	Co...	Sep...	4	Met...	¾Fl..	Sp..	TT.	TT.	IFW..	Rod...	IFW..	SN...	GC...	H...
NSU...... 5-15	98¼	45¼	28 x3½	4–2⅝x3 9/16	75	2200	15	Int..	L...	4	Sep.	Al..	CC.	Spur..	SpPr...	W..	ThS...	Zen...	V...	Bos..	M..	12	Yes.	Yes.	Co...	Sep...	4	Met...	¾Fl..	ST..	SP..	SP..	ETr...	Rod...	IRw..	SN...	GC...	A...
NSU...... 8-24	119	49¼	32 x4⅛	4–3⅛x4 15/16	128	2100	24	Int..	L...	4	Sep.	CI..	CC.	Spur..	SpPr...	W..	ThS...	Zen...	V...	Bos..	M..	12	Yes.	Yes.	MO...	Sep...	4	Met...	¾Fl..	ST..	SP..	SP..	ETr...	Rod...	IRw..	SN...	GC...	W..
NSU...... 14-40	126	54¼	34¾x4¾	4–3 11/16x5⅛	224	2100	40	Int..	L...	2	Sep.	CI..	CC.	Spur..	PrCs...	W..	ThS...	Zen...	V...	Bos..	M..	12	Yes.	Yes.	MO...	Sep...	4	Met...	¾Fl..	ST..	SP..	SP..	ETr...	Rod...	IRw..	SN...	GC...	W..
N.U.G......	86½	43⅜	28 x3½	4–2⅜x3 9/16	62	2200	15	Int..	F...	4	Sep.	Al..	CC.	Spur..	SpPr...	W..	ThS...	Gra...	G...	S&H..	M..	12	Yes.	Yes.	SP...	RA...	3	Met...	½Fl..	ST..	TT.	TT.	IRw..	Cab...	IRw..	WS...	GC...	D...
Omikron......	94½	38¼	26 x3	4–2⅜x3 9/16	62	2200	12	Int..	L...	4	Sep.	Al..	CC.	Heli...	SpPr...	W..	ThS...	Zen...	G...	S&H..	M..	12	Yes.	Yes.	Co...	Sep...	3	Met...	½Fl..	ST..	TT.	TT.	ITr...	Cab...	IRw..	WS...	GC...	W..
Opel...... 30-75	148	55⅛	36¾x5¼	6–4⅛x5 15/16	476	1400	75	Int..	L...	3	Sep.	CI..	CC.	Heli...	PrCs...	W..	Pum..	Own..	P...	Bos..	M..	12	Yes.	Yes.	Co...	Sep...	4	Met...	¾Fl..	Sp..	TT.	TT.	EFW..	Rod...	EFW..	SN...	OC...	H...
Opel...... 21-50	143	55⅛	35¼x5¼	6–3 15/16x5⅛	344	1400	50	Int..	L...	6	Sep.	CI..	CC.	Heli...	PrCs...	W..	Pum..	Own..	P...	Bos..	M..	12	Yes.	Yes.	Co...	Sep...	4	Met...	¾Fl..	Sp..	TT.	TT.	EFW..	Rod...	EFW..	SN...	OC...	H...
Opel...... 14-38	131	53⅛	34¾x4¾	4–3 9/16x5 5/16	210	1800	38	Int..	L...	4	Sep.	CI..	CC.	Heli...	PrCs...	W..	Pum..	Own..	P...	Bos..	M..	12	Yes.	Yes.	Co...	Sep...	4	Met...	¾Fl..	Sp..	TT.	TT.	EFW..	Rod...	EFW..	WW..	OC...	H...
Opel...... 10-30	124	53⅛	32¼x4¾	4–3¼x4 15/16	160	1800	30	Int..	L...	4	Sep.	CI..	CC.	Heli...	PrCs...	W..	Pum..	Own..	P...	Bos..	M..	12	Yes.	Yes.	Co...	Sep...	4	Met...	¾Fl..	Sp..	TT.	TT.	ITr...	Rod...	IRw..	WW..	OC...	H...
Opel...... 8-25	113	49¼	30¼x4⅛	4–2⅞x4 13/16	128	2000	25	Int..	L...	4	Sep.	CI..	CC.	Heli...	PrCs...	W..	Pum..	Own..	P...	Bos..	M..	12	Yes.	Yes.	Co...	Sep...	4	Met...	¾Fl..	St..	SP..	SP..	ITr...	Rod...	IRw..	WW..	OC...	H...
Peter & Moritz......	95¼	39⅜	28 x3½	2–3 5/16x4⅝	80	2200	22	Int..	H...	1	Sep.	Al..	CC.	Spur..	SpPr...	W..	ThS...	Sol...	G...	Bos..	M..	12	Yes.	Yes.	MO...	Eng...	2	Fab...	½Fl..	Wo.	SP..	TT.	ITr...	Rod...	IRw..	WS...	GC...	W..
Phaenomen......	128	55⅛	32¼x4¾	4–3⅜x5⅛	159	1800	30	Int..	L...	4	Sep.	CI..	CC.	Chai..	PrCs...	W..	ThS...	Opt...	V...	Bos..	M..	12	Yes.	Yes.	Co...	Sep...	4	Met...	¾Fl..	ST..	TT.	TT.	ETr...	Rod...	IRw..	SN...	GC...	A...
Phaenomen......	128	55⅛	34¾x4¾	4–3⅝x5½	252	1800	45	Int..	L...	4	Sep.	CI..	CC.	Chai..	PrCs...	W..	Pum..	Opt...	V...	Bos..	M..	12	Yes.	Yes.	Co...	Sep...	4	Met...	¾Fl..	ST..	TT.	TT.	ETr...	Rod...	IRw..	SN...	GC...	A...
Phaenomen......	130	55⅛	32¼x5	4–3⅜x5 7/16	192	2400	50	Det.	I...	4	Int..	Al..	OH.	Bevel.	PrCs...	W..	Pum..	Opt...	V...	Bos..	M..	12	Yes.	Yes.	SP...	Eng...	4	Met...	¾Fl..	Sp..	TT.	TT.	IRw..	Rod...	IRw..	SN...	GC...	D...
Phaenomobil. Threewhl	101	53½	28 x4	4–2 15/16x3 9/16	96	1500	14	Int..	L...	1	Sep.	Al..	CC.	Spur..	SpPr...	A...	......	Opt...	P...	Bos..	M..	...	No..	No..	Co...	Eng...	2	No...	......	Ch..	SP..	SP..	IRw..	Rod...	IRw..	Ba...	OC...	W..
Pilet......	103	48	28 x4	4–2¾x3 15/16	91	2000	22	Det.	I...	4	Sep.	Al..	OH.	Heli...	PrCs...	W..	ThS...	Zen...	V...	Bos..	M..	12	Yes.	Yes.	SP...	Eng...	4	Met...	½Fl..	Sp..	TT.	TT.	IRw..	Cab...	IRw..	WS...	GC...	W..
Presto...... 9-30	122	56⅜	32¼x4¾	4–3⅛x4⅞	144	2400	30	Int..	L...	4	Sep.	Al..	CC.	Spur..	PrCs...	W..	Pum..	Zen...	P...	Bos..	M..	12	Yes.	Yes.	MO...	Sep...	4	Met...	¾Fl..	Sp..	SP..	SP..	ETr...	Rod...	IRw..	SN...	GC...	W..
Priamus-Moelkamp...	137	55⅛	32¼x5¼	6–2¾x4 7/16	158	2800	50	Det.	I...	6	Sep.	Al..	OH.	Heli...	SpPr...	W..	ThS...	Opt...	V...	Bos..	M..	12	Yes.	Yes.	SP...	Eng...	4	Met...	½Fl..	Sp..	TT.	TT.	IRw..	Rod...	IRw..	SN...	GC...	D...
Protos...... C	126	53⅛	32¼x5¼	4–3⅛x5⅛	160	1800	30	Int..	L...	4	Int..	CI..	CC.	Chai..	PrCs...	W..	ThS...	Zen...	V...	Bos..	M..	12	Yes.	Yes.	DCo..	Sep...	4	Met...	¾Fl..	Sp..	SP..	TT.	ETr...	Rod...	IRw..	WS...	GC...	A...

ABBREVIATIONS:

A—Air
Al—Piston Material
A—Artillery
B—Battery
Ba—Steering Direct
Beve—Bevel
Bos—Bosch
CC—Crankcase
Ca— } Cable
Cab— } Cable
Ch— } Chain
Chai— } Chain
CI—Cast Iron
Co—Cone

D—Disk
Det—Detachable
E-FW—External Four Wheels
Ein—Einhorn
Eis—Eisemann
Eng—Unit with Engine
E-RW—External Rear Wheels
E-Tr—External Transmission
Ex—Expanding
F—Valves in head and side
F—Friction-Variable
Fab—Fabric
FlPr—Full pressure to all bearings including wrist pins
G—Gravity

GC—Grease Cups
Gra—Graetzin
H—Horizontally opposed
H—Hollow Spoked
Heli—Helical
I—Valves in head
I-FW—Internal Four Wheels
Int—Integral
I-RW—Internal Rear Wheels
I-Tr—Internal Transmission
Kie—Kiesel
L—L Head
Lum—Luma
M—Magneto
MD—Multiple Disk

Met—Metal
MO—Multiple Disk in Oil
MOF—Mix Oil with Fuel
No—None
OC—Oil Cups
OH—Overhead
Opt—Optional
P—Pressure
Pal—Pallas
Pl—Planetary
PrCs—Pressure to all crankshaft and connecting rod bearings. Splash to other parts
Pum—Pump
RA—Unit with Rear Axle

RR—Radius Rods
S—Sleeve
Sch—Schlee
Sep—Separate
SN—Screw and Nut
Sol—Solex
Sp—Spiral Bevel
SP—Springs
SP—Single Plate
Spe—Special
Spla—Splash
SpPr—Pressure to main crankshaft bearings only, splash to connecting rods and other parts
ST—Straight Bevel

TA—Torque Arm
ThS—Thermo Siphon
Tri—Tria
TT—Torque Tube
V—Vacuum
V—Valveless 2 stroke
W—Wire
W—Water
Wis—Wisco
Wo—Worm
WS—Worm and Sector
WW—Worm and Wheel
Zef—Zefan
Zen—Zenith

Continental Passenger Car Chassis Specifications—Continued

MAKE AND MODEL	GENERAL			ENGINE																		ELECTRICAL SYSTEM					TRANSMISSION				REAR AXLE				RUNNING GEAR						
						Rating						Camshaft				Cooling System		Fuel System				Ignition System						Gearset								Brakes						
																																		Hand		Foot				
	Wheelbase (Ins.)	Track (Ins.)	Tire Size (Ins.)	Number of Cylinders Bore & Stroke (Ins.)	Piston Displacement (Cu. Ins.)	R.P.M.	Brake H.P.	Cylinder Head	Valve Arrangement	Number of Cylinders Cast In One Piece	Cylinders Cast With Upper Half of Crank Case	Piston Material	Location	Drive	Oiling System Type	Medium	Water Circulation	Carbureter Make	Fuel Feed	Make	Current Sources	Voltage	Equipped With Electrical Starter?	Equipped With Electrical Generator?	Clutch Type	Location	Number of Forward Speeds	Universals	Type	Final Drive	Propulsion Taken By	Torque Taken By	Type & Location	Application	Type & Location	Steering Gear Type	Chassis Lubrication	Wheels Type
GERMAN—*Contd.*																																							
Rabag **23**	96½	45¼	28 x3½	4-2¹¹⁄₁₆x3¹³⁄₁₆	89	2500	20	Int..	I...	4	Sep.	Al..	OH.	Bevel.	PrCs...	W..	Pum..	Zen...	P...	Bos...	M..	12	Yes.	Yes.	MO...	Sep...	4	Met...	½Fl..	ST..	SP..	TA.	ETr...	Rod...	IRw..	SN...	GC...	W..
Rumpler	130½	52¾	32¼x5¼	6-2¾x4⅜	158	2800	50	Det.	I...	6	Int..	Al..	OH.	Heli...	PrCs...	W..	Pum..	Sum..	G...	Bos...	M..	12	Yes.	Yes.	MO...	RA...	3	None..	.....	ST..	RR.	Case	ETr...	Rod...	IRw..	SN...	GC...	W..
S.B. ..... **Two-cycle**	78¾	39⅜	26 x2	1-2⅜x2⅜	10	2500	4	Int..	V...	1	Sep.	Al..	No..	.....	MOF...	A...	.....	Opt...	G...	Bos...	M..	....	No..	No..	No...	Eng...	2	None..	.....	Ch..	SP..	SP..	ETr...	Rod...	IRw..	Ca...	GC...	W..
Schebera **5-8**	98½	45¼	28 x4½	4-2⅞x3⅜	75	1800	18	Int..	L...	4	Sep.	Al..	CC.	Heli...	SpPr...	W..	ThS...	Zen...	V...	Bos...	M..	12	Yes.	Yes.	Co....	Sep...	4	Met...	½Fl..	ST..	SP..	SP..	ETr...	Rod...	IRw..	SN...	GC...	A..
Schuette-Lanz	122	45¼	28 x3½	4-2 1/16x3⅜	63	2300	14	Int..	L...	4	Sep.	Al..	CC.	Heli...	SpPr...	W..	ThS...	Sum..	G...	Opt...	M..	12	Yes.	Yes.	SP....	Sep...	3	Fab..	½Fl..	Sp..	SP..	TA.	ITr...	Rod...	IRw..	WS...	OC...	D...
Schultz	108¼	43⅝	28 x3½	4-2⅛x3⅞	79	2500	18	Int..	L...	4	Sep.	Al..	CC.	Chai..	SpPr...	W..	ThS...	Pal...	G...	Bos...	M..	12	Yes.	Yes.	SP....	Eng...	3	Fab..	¾Fl..	ST..	TT.	TT.	IRw..	Cab...	IRw..	WS...	GC...	W..
Schuricht	104½	43⅝	28 x3½	4-2⅛x3⅜	62	2200	13	Det.	L...	4	Sep.	Al..	CC.	Heli...	SpPr...	W..	ThS...	Pal...	G...	Bos...	M..	12	Yes.	Yes.	Co....	Sep...	3	Met...	½Fl..	Sp..	SP..	TT.	ETr...	Rod...	IRw..	WS...	GC...	D...
Selve **8-32**	123	53⅛	32¼x5	4-3⅛x3⅜	126	2500	40	Int..	L...	4	Sep.	Al..	CC.	Chai..	SpPr...	W..	ThS...	Sol...	G...	Bos...	M..	12	Yes.	Yes.	Co....	Sep...	4	Met...	½Fl..	Sp..	SP..	TT.	ITr...	Rok...	IRw..	WW..	OC...	W..
Selve **8-40**	122	53⅛	32¼x5	4-3⅛x4⅜	127	2500	42	Int..	F...	4	Sep.	Al..	CC.	Heli...	SpPr...	W..	ThS...	Sol...	G...	Bos....	M..	12	Yes.	Yes.	SP....	Sep...	4	Met...	½Fl..	Sp..	TT.	TT.	ITr...	Rod...	IRw..	WW..	OC...	W..
Simson ..... **Bo**	104¼	49¼	30 x4	4-2¾x4	96	1800	22	Int..	F...	4	Sep.	Al..	CC.	Chai..	SpPr...	W..	ThS...	Zen...	V...	Bos...	M..	12	Yes.	Yes.	MO...	Sep...	4	Met...	½Fl..	Sp..	SP..	TT.	ITr...	Rod...	IRw..	SN...	GC...	A...
Simson ..... **Co**	124	53⅛	32¼x4¾	4-3⅛x5½	160	1900	40	Int..	F...	4	Sep.	Al..	CC.	Chai..	SpPr...	W..	ThS...	Sol...	V...	Bos...	M..	12	Yes.	Yes.	MO...	Sep...	4	Met...	½Fl..	Sp..	SP..	TT.	ITr...	Rod...	IRw..	SN...	GC...	A...
Simson ..... **F**	130	57⅛	34¾x5¼	4-3⅜x6⅝	222	2000	65	Det.	I...	4	Sep.	Al..	CC.	Chai..	PrCs...	W..	Pum..	Sol...	V...	Bos...	M..	12	Yes.	Yes.	SP....	Eng..	4	Met...	¾Fl..	Sp..	TT.	TT.	IFW..	Cab...	IFW..	SN...	GC...	W..
Simson ..... **So**	118¼	51¼	32¼x4¾	4-2¾x5⅛	120	2400	35	Det.	I...	4	Int..	Al..	OH.	Bevel.	PrCs...	W..	Pum..	Sol...	V...	Bos...	M..	12	Yes.	Yes.	SP....	Eng..	4	Met...	¾Fl..	Sp..	TT.	TT.	IRw..	Cab...	IRw..	SN...	GC...	W..
Simson ..... **S**	118¼	51¼	32¼x4¾	4-2¾x5⅛	120	2600	40	Det.	I...	4	Int..	Al..	OH.	Bevel.	PrCs...	W..	Pum..	Sol...	P...	Bos...	M..	12	Yes.	Yes.	SP....	Eng...	4	Met...	¾Fl..	Sp..	TT.	TT.	IFW..	Cab...	IFW..	SN...	GC...	W..
Sphinx ..... **KP**	103	45¼	28 x4	4-2½x3⅝	80	2000	18	Det.	I...	4	Int..	Al..	OH.	Chai..	PrCs...	W..	ThS...	Pal...	G...	Mea...	M..	12	Yes.	Yes.	Co....	Sep...	4	Met...	½Fl..	ST..	RR.	TT.	IRw..	Rod...	IRw..	WS...	GC...	A...
Steiger ..... **Pd**	118¼	53½	32¼x4¾	4-2⅝x6⅝	159	2400	50	Int..	I...	4	Sep.	Al..	OH.	Bevel.	SpPr...	W..	Pum..	Zen...	V...	Bos...	M..	12	Yes.	Yes.	MO...	Eng...	4	Met...	¾Fl..	Sp..	SP.	TT.	ETr...	Rod...	IRw..	SN...	GC...	W..
Stoewer **D3**	116	52	32 x4½	4-2⅝x4¾	128	2000	26	Int..	L...	4	Sep.	Cl..	CC.	Chai..	PrCs...	W..	Pum..	Zen...	V...	Bos...	M..	12	Yes.	Yes.	Co....	Sep...	4	Met...	½Fl..	ST..	TT.	TT.	ITr...	Rod...	IRw..	SN...	GC...	D...
Stoewer **D5**	132	53½	32¼x5	6-2⅝x4¹¹⁄₁₆	191	2000	36	Int..	L...	6	Sep.	Cl..	CC.	Chai..	PrCs...	W..	Pum..	Zen...	V...	Bos...	M..	12	Yes.	Yes.	Co....	Sep...	4	Met..	½Fl..	ST..	TT.	TT.	ITr...	Rod...	IRw..	SN...	GC...	D...
Szawe **10-50**	122	55⅛	32¼x4¾	6-2½x5¼	160	3000	50	Det.	I...	6	Sep.	Al..	OH.	Bevel.	PrCs...	W..	Pum..	Zen...	V...	Bos...	M..	12	Yes.	Yes.	SP....	Eng...	4	Fab..	FFl...	Sp..	TT.	TT.	IFW..	Cab...	IFW..	SN...	GC...	W..
Traeger **T5**	98½	44⅞	30 x4	4-2⅜x3⅝	79	3000	18	Int..	L...	4	Sep.	Cl..	CC.	Spur..	SpPr...	W..	ThS...	Sol...	G...	Bos...	M..	12	Yes.	Yes.	MO...	Eng...	3	Met...	½Fl..	ST..	SP..	SP..	ERw..	Rod...	IRw..	WS...	GC...	W..
Trinks .... **Three-wheel**	69	45¼	26 x3	4-2⅛x2⅜	42	2000	7	Det.	I...	4	Int..	Al..	OH.	Bevel.	PrCs...	W..	ThS...	Zen...	G...	Bos...	M..	.....	No..	No..	MO...	Sep...	2	No....	.....	Ch..	RR.	RR.	IRw..	Cab...	IRw..	Ca...	GC...	W..
Turbo **6-25**	110¼	46½	28 x3½	5-2⅝x2¾	94	3200	27	Det.	I...	1	Sep.	Al..	OC.	Spur..	SpPr...	A...	.....	Zen...	G...	Bos...	M..	12	Yes.	Yes.	MO...	Sep...	3	Met...	½Fl..	ST..	RR.	RR.	ERw..	Cab...	IRw..	WS...	OC...	D...
Turbo **8-32**	128	46½	28 x4	5-3⅛x3¼	103	3200	35	Det.	I...	1	Sep.	Al..	CC.	Spur..	SpPr...	A...	.....	Zen...	G...	Bos...	M..	12	Yes.	Yes.	MO...	Sep...	4	Met...	½Fl..	ST..	RR.	RR.	ERw..	Cab...	IRw..	WS...	OC...	D...
Wanderer **W8**	94½	42½	28 x4	4-2⅜x3⅝	80	2000	20	Det.	I...	4	Sep.	Al..	OH.	Chai..	SpPr...	W..	Pum..	Pal...	G...	Bos...	M..	12	Yes.	Yes.	Co....	Eng...	3	Met...	¾Fl..	Sp..	TT.	TT.	ETr...	Rod...	IRw..	SN...	OC...	H...
Willerd **8-40**	122	53	32¼x5	6-2⅝x4	128	3000	40	Det.	I...	6	Sep.	Al..	OH.	Heli...	PrCs...	W..	Pum..	Opt...	V...	Bos...	M..	12	Yes.	Yes.	SP....	Eng...	4	Met...	½Fl..	Sp..	TT.	TT.	IRw..	Cab...	IRw..	SN...	GC...	W..
Willerd **10-50**	122	53	32¼x5	6-2⅝x4⅞	150	3000	50	Det.	I...	6	Se ..	Al..	OH.	Heli...	PrCs...	W..	Pum..	Opt...	V...	Bos...	M..	12	Yes.	Yes.	SP....	Eng...	4	Met...	½Fl..	Sp..	TT.	TT.	IRw..	Cab...	IRw..	SN...	GC...	W..
Wittekind **2½S**	98½	45¼	28 x3½	4-2⅜x3⅞	79	2000	15	Det.	L...	4	Sep.	Al..	CC.	Spur..	PrCs...	W..	ThS...	Wis..	G...	S&H..	M..	12	Yes.	Yes.	Co....	Sep...	3	Met...	½Fl..	ST..	TT.	TT.	IRw..	Rod...	IRw..	WS...	GC...	W..
Wittekind **4S**	98½	45¼	28 x3½	4-2⅜x4⅝	92	2000	18	Det.	L...	4	Sep.	Al..	CC.	Spur..	PrCs...	W..	ThS...	Wis..	G...	S&H..	M..	12	Yes.	Yes.	Co....	Sep...	3	Met...	½Fl..	ST..	TT.	TT.	IRw..	Rod...	IRw..	WS...	GC...	W..
York ..... **II**	108	43⅜	28 x3½	2-3⅜x4⅜	76	3000	15	Det.	I...	1	Sep.	Al..	CC.	Spur..	PrCs...	A...	.....	Opt...	G...	Opt...	M..	12	Yes.	Yes.	Co....	Eng...	3	Met...	½Fl..	ST..	TT.	TT.	ITr...	Rod...	IRw..	WW..	GC...	D...
York ..... **IV**	108	43⅜	28 x3½	6-2⅜x2¾	62	3000	15	Det.	I...	6	Sep.	Al..	OH.	Bevel.	PrCs...	W..	ThS...	Opt...	G...	Opt...	M..	12	Yes.	Yes.	Co....	Eng...	3	Met...	½Fl..	ST..	TT.	TT.	IFW..	Cab...	IFW..	WW..	GC...	D...
Zimmermann	79	49¼	28 x4	4-2⅜x3⅜	62	2600	12	Int..	L...	4	Sep.	Al..	CC.	Spur..	FlPr....	W..	ThS...	Zen...	V...	Bos...	M..	12	Yes.	Yes.	Co....	Sep...	F..	.....	.....	Ch..	SP..	SP..	IRw..	Cab...	IRw..	WS...	GC...	W..

ABBREVIATIONS:

A—Air
Al—Piston Material
A—Artillery
B—Battery
Ba—Steer.ng Direct
Beve—Bevel
Bos—Bosch
CC—Crankcase
Ca, **Cab**—Cable
Ch, **Chai**—Chain
Cl—Cast Iron
Co—Cone
D—Disk
Det—Detachable
E-FW—External Four Wheels
Ein—Einhorn
Eis—Eisemann
Eng—Unit with Engine
E-RW—External Rear Wheels
E-Tr—External Transmission
Ex—Expanding
F—Valves in head and side
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FlPr—Full pressure to all bearings including wrist pins
G—Gravity
GC—Grease Cups
Gra—Graetzin
H—Horizontally opposed
H—Hollow Spoked
Heli—Helical
I—Valves in head
I-FW—Internal Four Wheels
Int—Integral
I-RW—Internal Rear Wheel s
I-Tr—Internal Transmission
Kie—Kiesel
L—L Head
Lum—Luma
M—Magneto
MD—Multiple Disk
Met—Metal
MO—Multiple Dis kin Oil
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No—None
OC—Oil Cups
OH—Overhead
Opt—Optional
P—Pressure
Pal—Pallas
Pl—Planetary
PrCs—Pressure to all crankshaft and conneeting rod bearings. Splash to other parts
Pum—Pump
RA—Unit with Rear Axle
RR—Radius Rods
S—Sleeve
Sch—Schlee
Sep—Separate
SN—Screw and Nut
Sol—Solex
Sn—Spiral Bevel
SP—Springs
SP—Single Plate
Spe—Special
Spla—Splash
SpPr—Pressure to main crankshaft bearings only, splash to connecting rods and other parts
ST—Straight Bevel
TA—Torque Arm
ThS—Thermo Siphon
Tri—Tria
TT—Torque Tube
V—Vacuum
V—Valveless 2 stroke
W—Wire
W—Water
Wis—Wisco
Wo—Worm
WS—Worm and Sector
WW—Wor mand Wheel
Zef—*Zefa* n
Zen—Zenith

Continental Makers Try to Cut Number of Models Produced

THE 79 leading passenger car makers in France produce 201 chassis models, which gives an average of 2.54 models per firm. In arriving at these figures no account has been taken of chassis differing only in their wheelbase or equipment, and there is hardly a factory in France which does not find it necessary to modify the standard chassis in various ways for those clients who attach special importance to speed.

During the past year the four-cylinder engine has strengthened its position at the expense of the six, the eight and the twelve. In 1922, 81.7 per cent of all models had four cylinders, while at the present time the proportion is 85 per cent. The six-cylinder has lost slightly; the eight-cylinder has dropped from 5 to 2 per cent, the eight and twelve-cylinder V-type having disappeared altogether.

CYLINDERS and crankcase in one casting are an exception, the percentage being not more than 3. Valve-in-head engines have increased from 35.4 to 48 per cent, the great majority of these having the camshaft in the base chamber. While in the minority if considered on the basis of types produced, the L-head engine leads in production.

Detachable cylinder heads have increased from 52 to 65 per cent, with indications that this tendency will continue. The only important maker adhering to the fixed cylinder head is Renault, and even he has made a departure in his small 6-hp. model. Practically every new model put on the market has a detachable head, and with rare exceptions they have valves in the head.

Chain drive at the front end of the engine has dropped from 39.5 to 32.1 per cent, with a consequent increase of pinions to 68.9 per cent.

THE proportion of four-cylinder engines with two main bearings is 50.6, compared with 51.5 a year ago. This includes all sizes of engine, but if the cycle car engines are excluded, the proportion of 45 per cent with three bearings would be considerably increased. Engines with five main bearings are 4.4 per cent of the total.

The vacuum system of gas feed has increased to 62 per cent of the whole. Intake manifolds are generally heated by water circulation only and there has been no change in the matter of ignition.

While front springing is fairly uniform, there is plenty of variety at the rear. The cantilever has dropped from 28 to 22 per cent, and the half-elliptic has gained in proportion. Front-wheel brakes, the outstanding feature a year ago, have increased still further and are now being used on 56 per cent of all French models. Servo brakes, with the exception of the Perrot type, are generally limited to high grade cars.

There is no change in wheel equipment. All tires are clincher bead. Balloon tires are not offered as standard equipment by any maker.

DESPITE unfavorable conditions, the German passenger car industry has grown rapidly during the past year. Including the makers of small three-wheeled cars, there are now 91 manufacturers of passenger cars producing a total of 156 models. The production capacity is far too great for the German market alone, and many of the plants are largely dependent upon foreign markets.

Of the 91 manufacturers, 14 also turn out commercial vehicles, while 46, or almost exactly one-half, including most of the newcomers, confine themselves to a single model of passenger car.

Four-cylinder engines are greatly in the majority, being found on 77.5 per cent of all cars, while 17.5 per cent have six-cylinder engines and the rest mostly two-cylinder engines, which are used on small cars exclusively. Only a single eight-cylinder model is built.

OF the four-cylinder engines, 4.8 per cent have their cylinders cast in pairs, all the rest having block castings. Of the six-cylinder engines, 72 per cent have block castings, 18.1 per cent have the cylinders cast in pairs and 9.9 per cent in threes. Aluminum cylinders with cast iron or steel liners are used on 9 models and steel cylinders on 5 models.

Aluminum pistons are used on 66.4 per cent of the models. The L-head engine tops the list with 64.75 per cent, followed by the I-head with 27.4 per cent. There are six models with two-stroke engines on the market, and Mercedes continues to manufacture Knight-engined cars. Camshaft drive is by spur gears on 36 per cent, helical gears on 33 per cent and chain on 31 per cent of the models.

Thermo-siphon cooling is used by 61 per cent of all models, 5 per cent are air-cooled and the rest use a pump. Lubrication is generally by a combined pressure and splash system.—W. F. BRADLEY and BENNO DIERFELD.

American Gasoline

This table comprises Motor Bus Chassis which are

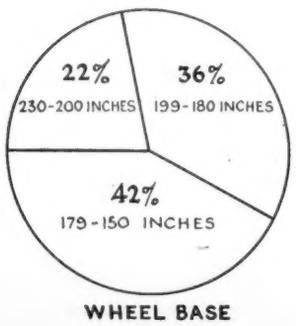
For other chassis which are recommended and adapted for Bus use, see models

MAKE AND MODEL	GENERAL							ENGINE							ELECTRICAL SYSTEM						GOVERNOR		TRANS
	Passenger Rating	Price	Standard Wheelbase (Ins.)	Tread, Front and Rear (Ins.)	Chassis Weight (Lbs.)	Tires, Type and Size		Make and Model	Number of Cylinders, Bore and Stroke (Ins.)	Rated Horse Power (N.A.C.C.)	Valve Arrangement	Oiling System	Fuel System		Ignition System		Generator and Starter Make	Maximum Capacity of Generator (Watts)	Battery		Type	Maximum Governed Speed (M.P.H.)	Clutch	
						Front (Ins.)	Rear (Ins.)						Carbureter Make	Fuel Feed	Make	Current Source			Make	Voltage and Amp. Hour Capacity			Make	Type
Acme.....K	30	.....	200	58½-74	7200	P-36x6	P-36x6d	Cont.....6B	6-3¾x5	33.7	L...	Fl Pr..	Zen...	V..	Eis...	M..	Rem a..	240	Wil...	6-111	N P...	35	B & B.	S P..
Ameco.....C	36	.....	213½	64½-76	9000	P-32x6	P-32x6	WSM....102	4-4¾x6	36.1	I...	Fl Pr..	Str....	V..	Spl...	B...	L-N.....	.....	Sta...	12-180	Ce....	35	Ful...	MDD
Bridgeport.....45	30	$3850	178	60 -72	5500	P-36x6	P-36x6d	Buda...EBU	4-4¼x5½	28.9	L...	Pr Cs.	Zen...	V..	Eis...	M..	Bos.....	Opt.	Wil...	6-120	N P...	N P...	B-L...	MDD
Brockway.....EB	20	.....	156	56 -56	3200	P-30x5	P-32x6	Wisc.....SU	4-4 x5	25.6	I...	Pr Cs.	Zen...	V..	Spl...	M..	L-N.....	112	Exi...	6-105	N P...	N P...	B-L...	MDD
Brockway.....J3	25	.....	185	66½-71	8000	P-36x6	P-36x6d	Cont.....6B	6-3¾x5	33.7	L...	Fl Pr..	Zen...	V..	Spl...	M..	L-N.....	.....	Exi...	12-220	N P...	N P...	B-L...	MDD
Chicago Bus (See 36).																								
Day-Elder.....20	20	.....	168	56 -58	5200	P-36x6	P-38x7	Cont.....K4	4-4⅛x5¼	27.2	L...	Fl Pr..	Zen...	V..	Eis...	M..	Bos.....	75	Wil...	6-153	Su....	35	B-L...	MDD
Day-Elder.....25	25	.....	180	58 -58½	5600	P-36x6	P-40x8	Buda...EBU	4-4¼x5½	28.9	L...	Pr Cs.	Zen...	V..	Eis...	M..	Bos.....	75	Wil...	6-153	Su....	35	B-L...	MDD
Day-Elder.....30	30	.....	192	68¼-74	6000	P-36x6	P-36x6d	Buda...YBU	4-4½x6	23.4	L...	Pr Cs.	Zen...	V..	Eis...	M..	Bos.....	75	Wil...	6-153	Su....	35	B-L...	MDD
†Duplex.....AB	23	.....	160	56 -62	4400	P-35x5	P-38x7	HinkHAA400	4-4 x5¼	25.6	L...	Pr Cs.	Str...	V..	Wes...	B...	Wes.....	.....	Pre...	6-34	N P...	N P...	B-L...	MDD
Fageol.....	22	5375	218	70 -71	....	P-36x6	P-38x7	HaS.....50	4-4¼x5½	28.9	I...	Pr Cs.	Zen...	V..	Del...	B...	Del.....	12	Exi...	12-	Ce....	41	B-L...	MDD
Fageol.....	22	5825	230	70 -78¼	....	P-38x7	P-36x6d	HaS.....75	6-4¼x5½	43.0	I...	Pr Cs.	Zen...	V..	Del...	B...	Del.....	.....	Exi...	12-	Ce....	41	B-L...	MDD
Fifth Ave. Coach....J	29	6900	172	68¼-71¼	5660	C*-34x5	C*-34x7d	Yell.....EZ	4-4 x6	25.6	Sl...	Pr Cs.	Zen...	V..	Eis...	M..	§§N-E..	300	Wil...	12-90	N P...	N P...	Own..	SP...
Fifth Ave. Coach....L	51	8860	174‡	67 -77½	6670	S-36x5	S-36x5d	Yell.....EZ	4-4 x6	25.6	Sl...	Pr Cs.	Zen...	G..	Eis...	M..	§§N-E..	300	Wil...	12-90	N P...	N P...	Own..	SP...
Garford.....726	25	.....	168	56 -65½	4800	P-32x6	P-32x6d	Buda...EBU	4-4¼x5½	28.9	L...	Pr Cs.	Str...	G..	Spl...	M..	A-K.....	.....	Exi...	.....	Opt...	Opt...	Own..	MDD
Garford.....51D	29	.....	187	68 -75¾	6500	P-36x6	P-36x6d	Buda...YBU	4-4½x6	23.4	L...	Pr Cs.	Str...	V..	Spl...	M..	Rem b....	.....	Wil...	6-190	Opt...	Opt...	Own..	MDD
Guilder.....30	30	4250	191	64 -70	5600	P-36x6	P-36x6d	Buda...EBU	4-4¼x5½	28.9	L...	Pr Cs.	Zen...	V..	Eis...	M..	L-N.....	.....	Wil...	12-	.....	30	B-L...	MDD
†Gary.....FB	21	.....	154	56 -56	3680	P-35x5	P-36x6	Buda...GBU	4-4 x5¼	25.6	L...	Pr Cs.	Zen...	V..	Eis...	M..	Ves. c....	.....	Ves...	6-03	Su....	26	Ful...	MDD
†Gary.....Bd	25	.....	175	58 -58	4450	P-35x5	P-38x7	Buda...EBU	4-4¼x5½	28.9	L...	Pr Cs.	Zen...	V..	Eis...	M..	Ves. c....	.....	Ves...	6-03	Su....	25	Ful...	MDD
International.....33	18	.....	150	56 -56½	....	C*-36x4	S*-36x6	Own.....	4-3¾x5	22.5	I...	Spla..	Own...	G..	Bos...	M..	‡‡Rem..	175	Pre...	6-100	Ce....	19	Own..	MDD
International.....53	29	.....	190	64½-65	....	P-36x6	P-36x6d	Own.....	4-4¼x5	28.9	I...	Spla..	Own...	V..	Bos...	M..	Rem....	175	Pre...	6-200	Ce....	34	Own..	MDD
Kissel.....	18	5200	202	64½-66	....	P-34x7	P-34x7d	Own.....	4-4¼x5½	28.9	L...	.....	Str...	V..	Bos...	.....	Rem.....	.....	Wil...	6-153	.....	.....	B-L...	.....
Mack.....AB	25	4720	194½	58¼-60¼	5370	P*-32x6	P*-32x6d	Own.....	4-4¼x5	28.9	L...	Sp Pr.	Zen...	V..	Spl...	M..	L-N.....	.....	Exi...	12-120	N P...	N P...	Own..	MDD
Master.....DDB	30	.....	194	59 -59	6000	S-36x6	S-40x8	Buda...EBU	4-4¼x5½	28.9	L...	Pr Cs.	Zen...	V..	Eis...	M..	Wes.....	.....	Wil...	12-	.....	25	Ful...	MDD
Menominee.....T	16	2600	175	56 -56	3850	P-32x6	P-32x6d	Wisc.....Y	6-3⅝x5	.....	.....	.....	Zen...	V..	Bos...	M..	Bos.....	.....	Wil...	6-	N P...	38	Det...	MDD
Menominee.....DB	25	4400	186	68 -73	5900	P-36x6	P-36x6d	Wisc...TAU	4-4 x6	25.6	I...	Pr Cs.	Str...	V..	Eis...	M..	Bos.....	.....	Wil...	6-	Su....	32	Det...	MDD
Moreland.....RC	12	2280	180	56 -56	.....	P-32x6	P-32x6	Herc.....0	4-4 x5	25.6	L...	Pr Cs.	Zen...	V..	Spl...	M..	A-L.....	85	Hob...	6-140	Ce.....	.....	B-L...	MDD
Moreland.....EC	20	3780	178	61 -60	4590	P-34x5	P-34x5d	Cont.....K4	4-4⅛x5¼	27.2	L...	Fl Pr..	Str...	V..	Spl...	M..	A-L.....	150	Hob...	6-140	Ce.....	.....	B-L...	MDD
Moreland.....AC	25	4700	....	.....	5660	P-36x6	P-36x6d	Cont.....L4	4-4½x5½	32.4	L...	Fl Pr..	Str...	V..	Spl...	M..	A-L.....	150	Hob...	6-140	Ce.....	.....	B-L...	MDD
Parker.....E24B	16	2400	150	55 -58	3700	P-32x6	P-32x6	Wisc.....SU	4-4 x5	25.6	I...	Pr Cs.	Str...	V..	Wes...	B...	Wes...	90	Glo...	6-80	Ce....	40	Ful...	MDD
Phila. Motor Coach. P	65	6500	216	64½-75	8750	S-34x6	S-34x6d	Own.....	6-4 x6	38.4	I...	Pr Cs.	Zen...	V..	N-E...	B...	N-E.....	.....	Exi...	12-180	.....	25	B-L...	MDD
Selden.....52	30	.....	195	68 -74	7200	S*-36x5	S*-36x5d	Cont.....L4	4-4½x5½	32.4	L...	Fl Pr.	Str...	V..	Bos...	M..	N-E....	250	Pre...	12-	Ce.....	.....	B-L...	MDD
Sterling.....GB1	21	4050	156	56 -58	4800	P-35x5	P-35x5d	Wauk....FU	4-4 x5¾	25.6	L...	Pr Cs.	Zen...	V.	Eis...	M..	Bos.....	.....	Gou...	6-132	Ce....	27	B-L...	MDD
Sterling.....GB2	29	4575	174	60¼-58½	5700	P-36x6	P-36x6d	Wauk....CU	4-4⅜x5¾	30.6	L...	Pr Cs.	Zen...	V..	Eis...	M..	Bos.....	.....	Gou...	6-132	Ce....	28	B-L...	MDD
Ultimate.....BU	30	5600	198	66½-69	....	P-36x6	P-36x6d	Buda...YBU	4-4½x6	23.4	L...	Pr Cs.	Str...	V..	Eis...	M..	N-E.....	.....	Wes...	12-378	Opt...	Opt...	B-L...	MDD
White.....50A	25	.....	198	58½-67½	5100	P-36x6	P-36x6d	Own.....	4-4¼x5¾	28.9	L...	Pr Cs.	Zen...	V..	.....	M..	L-N.....	.....	Opt...	12-	Ce.....	.....	Own..	SP...
Wisconsin.....BA	25	6500	218	68 -68	5500	P-32x6	P-34x7	Cont.....6B	6-3¾x5	33.7	L...	Fl Pr..	Str...	V..	Del...	M..	Del.....	.....	Exi...	6-	N P...	N P...	B-L...	MDD
Wisconsin....6-Wheel	28	8500	216	68 -68	6000	P-32x6	P-32x6	Cont.....6B	6-3¾x5	33.7	L...	Fl Pr..	Str...	V..	Del...	B...	Del.....	.....	Exi...	6-	N P...	N P...	B-L...	MDD
Yellow Coach.....Z	67	.....	192	71 -73½	....	S*-34x5	S*-34x5d	R & V.....	4-4 x6	25.6	Sl..	Pr Cs.	Zen...	V..	.....	M..	.....	300	.....	.....	.....	.....	Own..	SP...

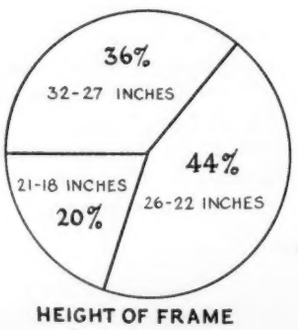
ABBREVIATIONS:

*—Pneumatics optional at extra cost
‡—Also Fabric Joint
†—1923 specifications
§—Price with body
§§—Generator Only
‡‡—Optional at extra cost
a—Delco
A-K—Atwater-Kent
A-L—Auto-Lite
AT—Attached
Atl—Atlas
b—Atwater-Kent
B—Battery
B&B—Borg & Beck
B-L—Brown-Lipe
Blo—Blood
Bos—Bosch
Bud—Budd
c—Westinghouse
C—Cushion
C&L—Cam & Lever
Ce—Centrifugal
Cla—Clark
Col—Columbia
Con—Continental Axle
Cont—Continental
Cot—Cotta
d—Dual
D-A—Disk Aluminum
D-C—Disk Cast Steel
D-P—Disk Pressed Steel
Day—Dayton
Del—Delco
Det—Detlaff
DR—Double Reduction
E—Free End
E-DS—External Driveshaft
E-RW—External Rear Wheels
Eis—Eisemann
Eng—Unit with engine
Exi—Exide
FF—Full Floating
Fli—Flint
Fl Pr—Full pressure to all bearings including wrist pins
Ful—Fuller
G—Gravity
Gem—Gemmer
Glo—Globe
Gou—Gould
HaS—Hall Scott
Here—Hercules
Hink—Hinkley
Hob—Hobbs
I—Both valves in head
I-FW—Internal Four Wheels
I G—Internal Gear
Ind—Indestructible
I-RW—Internal Rear Wheels
KU—Kicked Up
L—"L" Head
L-N—Leece-Neville
Lav—Lavine

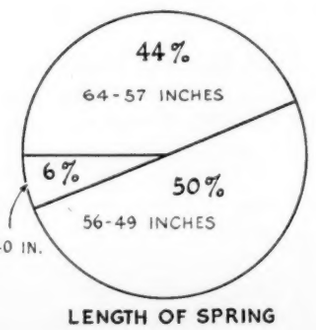
Chief Features of Gasoline



WHEEL BASE



HEIGHT OF FRAME



LENGTH OF SPRING

CLUTCH TYPE

Motor Bus Specifications

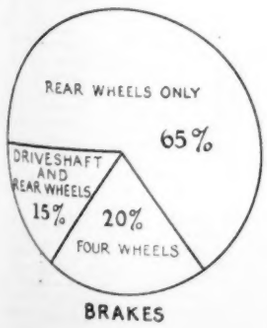
designed and sold exclusively for Passenger Transportation

having ‡‡ sign in "American Gasoline Truck Specifications," pages 427-432

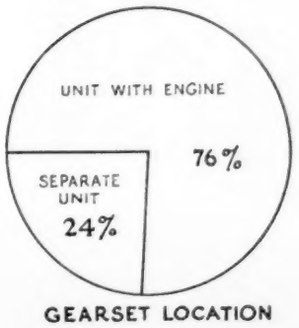
TRANSMISSION						REAR AXLE				BRAKES				SPRINGS			RUNNING GEAR						MISCELLANEOUS						
Gearset				Power Tire Pump	Universal Joints, Number and Make	Make and Model	Final Drive		Total Ratio from Engine to Drive Wheels on Direct	Service		Emergency		Front	Rear	Shackles Type, Front and Rear	Front Axle Make	Steering Gear			Wheels		Body Allowance (Lbs.)	Height to Top of Frame at Dash (Ins.)	Frame		Shock Absorbers Fitted	Road Clearance Under Axles	
Make	Location	Number of Forward Speeds	Low Gear Reduction				Type			Type and Location	Braking Area (Sq. Ins.)	Type and Location	Braking Area (Sq. Ins.)	Length and Width (Ins.)	Length and Width (Ins.)			Make	Type	Outside Dia. of Minimum Turning Circle (Ft.)	Make	Type and Material			Type at Rear	Outriggers		Min. with Specified Tire Size (Ins.) Front	Min. with Specified Tire Size (Ins.) Rear
Cot..	Eng..	4	5.20	Opt...	2-Blo..	Tim....6511	Wo.	F F.	6.00	I-Rw..	247	I-Rw..	247	42 -3	64 -3	M-M..	Tim...	Ros...	C&L..	68	Bud...	D-P...	3000	27	KU.	UT.	No..	10 -36	5 -36
Ful..	Se U..	8	....	Stk...	2-Blo..	Vig.....425	I G.	F F.	5.40	I-Fw..	678	I-Rw..	.....	40 -2½	40 -2½	M-M..	Shu...	Ros...	C&L..	69	Spe...	D-C..	3000	26	St..	UT.	Yes.	6½-32	.....
B-L..	Eng..	4	.....	Stk...	2-Spi..	Tim....6560	Wo.	F F.	6.70	I-Rw..	.....	I-Rw..	.....	40 -2½	56 -3	M-M..	Tim ..	Ros...	W&S..	36	Bud...	D-P...	6000	31½	St..	AT.	No..	5½-52	6½-65
B-L..	Eng..	4	5.35	Opt...	2-Spi.	Col....52001	S B.	F F.	5.12	E-Rw.	120	I-Rw..	108	46 -2½	60 -3	M-M.	Col...	Gem..	W&W.	.....	Ind...	D-P...	....	28½	KU.	UT.	No..	10 -30	10 -32
B-L..	Eng..	4	5.35	Opt...	2-Spi‡.	Cla.....3D	I G.	F F.	7.00	E-DS.	195	I-Rw..	300	46 -3	60 -3½	M-M..	Shu...	Gem..	W&W.	62½	Sew...	D-P...	3000	27	KU.	UT.	No..	7 -36	10 -36
B-L..	Eng..	3	3.36	Opt...	2-Spi..	Tim....6460	Wo.	½ F	6.00	I-Rw .	152	I-Rw..	152	40 -2½	54 -2½	M-M..	Col...	Gem..	W&W.	60	Van..	D-P...	2500	32	St..	UT.	No..	11-36	11½-38
B-L..	Eng..	4	5.35	Opt...	2-Spi..	Tim....6560	Wo.	F F.	6.80	I-Rw..	184	I-Rw..	184	42 -2½	56 -3	M-M.	Col...	Gem..	W&W.	60	Van..	S-C...	3000	32	St..	UT.	No..	11-36	12 -40
B-L..	Eng..	4	5.35	Opt...	2-Sne.	Tim....6511	Wo.	F F.	6.80	I-Rw..	234	I-Rw..	234½	42 -2½	60 -3	M-M.	Shu...	Gem..	W&W.	54	Van..	S-C...	3500	25	KU.	Opt.	No..	7 -36	6½-36
B-L..	Eng..	4	4.00	.....	4-Pet..	She....W103	Wo.	½ F	6.50	I-Rw..	....	I-Rw..	....	38	48	.....	She...	Ros...	S&N..	.....	Mot..	S-W..	....	31½	St..	AT.	....	12½-35	11½-38
B-L..	Eng..	4	.....	N P..	4-Spi..	Tim....6511	Wo.	F F.	6.00	I-Fw..	130	I-Fw..	130	41 -2½	58 -3	M-M..	Tim...	Ros...	C&L..	74	Bud...	D-P...	....	19¾	KU.	AT.	Yes.	7½-36	8½-38
B-L..	Eng..	.....	.....	N P..	4-Spi..	Tim....6511	Wo.	F F.	4.00	I-Rw..	130	I-Rw..	130	41 -2½	56 -3	M-M..	Tim...	Ros...	C&L..	36	Bud...	D-P...	....	19¾	KU.	AT.	Yes.	7½-36	9 -38
Own..	SeU...	4	4.00	N P..	2-Sne.	Tim....6412	Wo.	½F.	5.40	I-Rw..	182	I-Rw..	182	48 -3	62 -3	R-R..	Tim...	Ros...	S&N..	62	Own..	S-C...	2575	26	KU	UT.	Yes.	9 -34	7 -34
Own..	SeU...	4	4.00	N P..	2-Sne.	Own.....	I G.	F F.	6.67	E-DS.	207	E-Rw.	320	18 -3½	56 -3½	M-M..	Own..	Ros...	S&N..	65	Own..	S-C...	4160	18	KU.	UT.	No.	8½-36	5½-36
Own..	SeU...	4	4.84	Opt...	2-Spi..	Tim....6560	Wo.	F F.	5.66	I-Rw..	185	I-Rw..	185	42 -2½	50 -2½	M-M..	Own..	Ros...	S&N..	60	Bud...	D-P...	3000	....	St..	UT.	No..	.....	7½-32
Own..	SeU...	4	4.84	Stk...	2-Spi..	Tim...6511G	Wo.	F F.	5.40	I-Rw..	454	E-DS.	84	42 -3	60 -3½	M-M..	Tim...	Ros...	S&N..	60	Day..	S-C...	3100	25½	KU.	AT.	No.	7 -36	7 -36
B-L..	Eng..	.....	.....	.....	2-M-E	Wis....65C	D R	.....	.....	E-DS.	....	I-Rw..	....	44 -2½	60 -3	M-M..	Shu...	Ros...	S&N..	.....	Bud...	D-P..	3500	26	KU.	Opt.	No.	10 -36	11 -36
Ful..	Eng..	3	3.00	.....	3-Opt.	Tim....6352	Wo.	½ F	6.20	I-Rw..	....	I-Rw..	....	44 -	52 -	.....	Tim..	Ros..	S&N..	.....	.....	.....	.....	.....	St..	UT.	.....	.....	.....
Ful..	Eng..	3	3.00	.....	3-Opt.	Tim....6460	Wo.	½ F	6.00	I-Rw..	....	I-Rw..	....	44 -	52 -	.....	Tim..	Ros..	S&N..	.....	.....	.....	.....	.....	St..	UT.	.....	.....	.....
Own..	Eng..	3	4.00	Opt...	2-Own	Own.....	I G.	F F.	8.00	I-Rw..	196	I-Rw..	196	40½-2½	54 -2½	M-M..	Own..	Own..	W&W.	48	Own..	S-W..	.....	.....	.....	.....	.....	.....	.....
Own..	Eng..	4	3.12	Stk...	2-Own	Own.....	I G.	F F.	8.00	I-Fw..	563	E-DS.	96	41¼-2½	57¼-3	M-M.	Shu...	Own..	W&W.	70	Bud...	D-P...	2800	24½	KU.	UT.	No.	.....	.....
.....	Eng..	.....	.....	.....	Spi...	Wis....60B	D R	.....	.....	.....	.....	.....	.....	.....	.....	.....	Shu...	Ros...	.....	.....	Whi..	.....	.....	.....	.....	.....	.....	.....	.....
Own..	Eng..	4	3.22	Opt...	2-Spi..	Own.....	D R	F F.	5.80	I-Rw..	255	E-DS.	144	42½-3	56¼-3½	R-R..	Own..	Own..	W&W.	.....	Bud...	D-P...	3000	25¼	St..	UT.	No.	5½-32	8½-32
Ful..	Eng..	3	.....	.....	3-....	Wal....25A	D R	F F.	7.66	-Rw..	....	-Rw..	....	.....	.....	M-M..	Shu...	Ros...	.....	66	St M..	.....	3500	26	.....	.....	.....	.....	.....
Cot..	Eng..	3	3.68	Opt...	2-Spi‡.	Col....52000	S B.	F F.	5.10	E-Fw.	....	I-Rw..	....	40 -2½	60 -2½	M-M..	Shu...	Lav...	S&N..	.....	Whi...	D-A..	2400	23½	KU.	UT.	No..	11 -32	10 -32
Cot..	Eng..	4	5.20	Opt...	2-Spi‡.	Wis....120K	D R	½ F	6.16	I-Rw..	....	I-Rw..	....	44 -2½	56 -3	M-M..	Tim...	Ros...	S&N..	59	Ind...	D-P...	3200	26	KU.	AT.	No..	9 -36	10½-36
B-L..	Eng..	3	4.09	Opt...	2-Pet..	Tim....5512	Wo.	½ F	5.30	E-Rw.	....	I-Rw..	....	34¾-2½	56 -3	M-M..	Tim...	Ros...	C&L..	.....	Own..	D-A..	2000	20	KU.	AT.	No..	.....	.....
B-L..	Eng..	4	5.35	Opt...	2-Pet..	Tim....6410	Wo.	½ F	5.25	I-Rw..	....	I-Rw..	....	38 -2½	56 -3	M-M..	Tim...	Ros...	C&L..	.....	Bud...	D-P...	3000	21	KU.	AT.	No.	.....	.....
B-L..	Eng..	4	5.35	Opt...	2-Pet..	Tim....6511	Wo.	F F.	6.00	I-Rw..	....	I-Rw..	....	39½-2½	56 -3½	M-M..	Tim...	Ros...	C&L..	.....	Bud...	D-P...	3500	22	KU.	AT.	No.	.....	.....
Ful..	Eng..	3	4.00	Stk...	1-Blo.	Fli.....72Ba	S B.	F F.	4.90	E-Rw.	84	I-Rw..	84	34 -2	50 -2½	M-M..	Con...	Lav...	S&N..	50	Whi...	D-C..	2000	27	KU.	UT.	No..	9 -32	10 -32
B-L..	SeU...	4	.....	.....	4-Spi.	Atl.....	I G.	D...	7.00	-Rw..	....	-Rw..	....	.....	.....	M-M..	Shu...	Ros...	.....	70	Ind...	.....	5900	20	.....	.....	.....	8 -34	8 -34
B-L..	SeU...	4	.....	Opt...	2-Spi.	Tim.....	Wo.	F F.	Opt...	I-Rw..	....	I-Rw..	....	.....	.....	M-M..	Tim...	Gem..	W&W.	66	Bud...	D-P...	.....	.....	.....	.....	.....	.....	.....
B-L..	Eng..	4	5.35	Stk...	2-Uni‡	Tim....6460	Wo.	½ F	6.00	I-Rw..	....	I-Rw..	....	48 -3	54 -3	M-M..	Tim...	Ros...	S&N..	.....	Bud...	D-P...	2200	31	St..	UT.	No..	11½-35	11½-35
B-L..	Eng..	4	5.35	Stk...	2-Uni‡	Tim....6560	Wo.	F F.	6.00	I-Rw..	....	I-Rw..	....	48 -3	54 -3	M-M..	Tim...	Ros...	S&N..	.....	Bud...	D-P...	2800	32	St..	UT.	No..	13¼-36	11½-36
B-L..	SeU...	4	5.35	Opt...	2-Spi..	Tim...6511A	Wo.	½ F	6.50	I-Rw..	....	I-Fw..	....	46 -3	62 -4	M-M..	Shu...	Ros...	W&S.	.....	Bud...	D-P...	.....	.....	.....	.....	.....	.....	.....
Own..	Eng..	4	.....	Opt...	2-Spi..	Own.....	D R	½ F	5.60	E-Rw.	....	I-Rw..	....	41½-2½	60 -3	M-M..	Own..	Own..	W&S.	.....	Bud...	S-P..	.....	30½	St..	AT.	.....	.....	.....
B-L..	Eng..	4	3.95	Opt...	2-Spi‡.	Wis....60A	D R	½ F	6.00	I-Fw..	....	I-Rw..	....	42 -2½	60 -3	M-M..	Con...	Gem..	W&W.	75	Whi...	D-A..	4000	21	KU.	AT.	No..	9 -32	10 -34
B-L..	Eng..	4	3.95	Opt...	2-Pet..	Wis....800G	Wo.	½ F	6.00	I-Fw..	....	I-Fw..	....	42 -2½	52 -3	M-M..	Tim...	Gem..	W&W.	98	Whi...	D-A..	4000	21	KU.	AT.	Yes.	8 -32	8 -32
Own..	SeU...	4	5.35	.....	2-‡...	Own.....	Wo.	½ F	6.25	I-Fw..	774	I-Rw..	....	50 -3½	63½-4	R-R..	Own..	Own..	W&W.	34	.....	S-C..	.....	23½	KU.	UT.	No.	.....	.....

M—Magneto
MDD—Multiple Dry Disk
M&E—Merchants & Evans
Mot—Motor Wheel Corp.
N-E—North East
NP—No provision
Opt—Optional
P—Pneumatics
Pet—Peters
P-G—Pressure Gun
PrCs—Pressure to all crankshaft and connecting rod bearings—splash to other parts
Pre—Pressure
R—Rubber
R & V—R & V Knight
Rem—Remy
Ros—Ross
S—Solid
SB—Spiral Bevel
S-C—Spoked Cast Steel
SeU—Separate Unit
Sew—Sewell
She—Sheldon
Shu—Shuler
Sl—Sleeve
Sne—Snead
S&N—Screw & Nut
SP—Single Plate
S-P—Spoked Pressed Steel
Spe—Special
Spi—Spicer
Spl—Splitdorf
Spla—Splash
SplPr—Pressure to main crankshaft bearings only, splash to connecting rod and other parts
St—Straight
Stk—Stock
Str—Stromberg
Stn—Standard
St.M—St. Marys
Su—Suction
S-W—Spoked Wood
Tim—Timken
Uni—Universal
UT—Unattached
V—Vacuum
Ves—Vesta
Vig—Vig Tor
Wal—Walker
Wauk—Waukesha
Wes—Westinghouse
Whi—Whitcomb
Wil—Willard
Wis—Wisconsin Axle
Wisc—Wisconsin
Wo—Worm
W&S—Worm & Sector
WSM—Wellman-Seaver-Morgan
W&W—Worm and Wheel
Yell—Yellow Sleeve Valve
Zen—Zenith

Motor Bus Design, 1924



BRAKES



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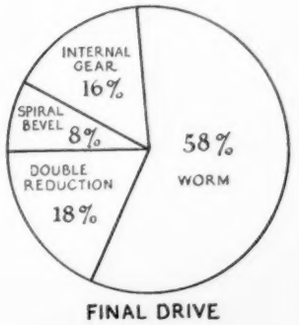
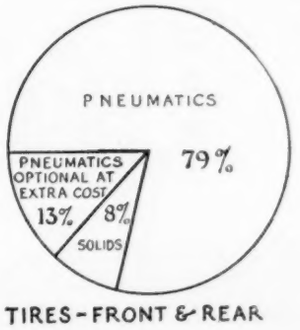


FINAL DRIVE



TIRES - FRONT & REAR

American Electric

MAKE AND MODEL	GENERAL								BATTERY						PERFORMANCE	
	Body Type	Number of Passengers	Price Complete	Price Without Battery	Wheel base (Ins.)	Tread (Ins.)	Tire Size (Ins.)	Weight Complete (Lbs.)	Make	Model	Price	Voltage	Ampere Hour Capacity	Location	Miles per Charge with Full Load	Speed with Full Load (M.P.H.)
Detroit.....90	Coupe.....	4	$2800	$2575	100	56	32x4	....	Phila.....	WTXI.....	$414	84	153	½UH & ½RC...	80-100	25
Detroit.....91-3	Brougham...	5	3500	3250	100	56	32x4½	3950	Phila.....	WTXI.....	435	84	175	½UH & ½RC...	80-100	25
Milburn.....27-L	Brougham...	5	2235	Var.....	105	55	33x4	3080	Phila.....	13-WTXI....	....	80	153	½UH & ½RC...	70-90	24
Rauch & Lang....S-66	Sedan.....	4	4250	Var.....	102	56	32x4½	Var.....	Exide‡....	Special.....	Var.....	....	175-200	½UH & ½RC...	60-100	25
Rauch & Lang....B-68	Brougham...	4	4250	Var.....	102	56	32x4½	4200	Exide‡....	MV-11.....	Var.....	95	180	½UH & ½RC...	60-100	28
Rauch & Lang....C-55	Coach.....	5	4250	Var.....	102	56	33x4½	Var.....	Exide‡....	Special.....	Var.....	....	175-200	½UH & ½RC...	60-100	25

ABBREVIATIONS:
Art—Artillery
Elw.-Par—Elwell-Parker
F. Ca—Floating Cantilever
Gen. Elec—General Electric
Phila—Philadelphia
Tor. arm—Torque Arm
Tor. tube—Torque Tube
Under F—Under Floor
Under S—Under Seat
Unit with J. S—Unit with Jackshaft

American Electric

MAKE AND MODEL	Tons Capacity	Weight with Battery (Lbs.)	CHASSIS PRICE		Wheel Base (Ins.)	TIRES. TYPE AND SIZE		MOTORS				CONTROLLER			DRIVE		
			With Battery	Without Battery		Front, (Ins.)	Rear, (Ins.)	Location	Make	Number	Total Horse Power	Location	Lever Location	Number of Forward Speeds	First Reduction	Final Drive	Total Gear Reduction
Autocar.....	1	Var.....	Var.....	2400	107	S-34x4	S-34x5	Unit with R A.	G E....	1	8	Under S.....	Left of S....	5	Bevel...	Spur....	.....
Autocar.....	2	Var.....	Var.....	2800	120	S-34x5	S-34x6	Unit with R A.	G E....	1	8	Under S.....	Left of S....	5	Bevel...	Spur....	.....
Autocar.....	3	Var.....	Var.....	3200	128	S-34x5	S-36x8	Unit with R A.	G E....	1	8	Under S.....	Left of S....	5	Bevel...	Spur....	.....
Autocar.....	4	Var.....	Var.....	4000	128	S-34x5	S-36x8	Unit with R A.	G E....	1	8	Under S.....	Left of S....	5	Bevel...	Spur....	.....
Autocar.....	5	Var.....	Var.....	4300	136	S-34x5	S-36x14	Unit with R A.	G E....	1	8	Under S.....	Left of S....	5	Bevel...	Spur....	.....
Commercial T.....D1	½	Var.....	Var.....	.....	100	S-36x3	S-36x3½	Unit with R A.	G E....	2	3	Steer C.....	Below S W..	4	Spur....	Spur....	11.5
Commercial T.....D1-5	¾	Var.....	Var.....	.....	116	S-36x3	S-36x4	Unit with R A.	G E....	2	3	Steer C.....	Below S W..	4	Spur....	Spur....	11.5
Commercial T.....B1-5	¾	Var.....	Var.....	.....	91‡	S-36x3	S-36x4	Unit with R A.	G E....	2	3	Steer C.....	Below S W..	4	Spur....	Spur....	11.5
Commercial T.....D-2	1	Var.....	Var.....	.....	124	S-36x3½	S-36x5	Unit with R A.	G E....	2	3	Steer C.....	Below S W..	4	Spur....	Spur....	11.5
Commercial T.....B-4	2	Var.....	Var.....	.....	116	S-36x4	S-36x4d	Unit with R A.	G E....	2	4	Steer C.....	Below S W..	4	Spur....	Spur....	12.1
Commercial T.....C-6	3	Var.....	Var.....	.....	122	S-36x4	S-36x4d	Unit with R A.	G E....	2	3	Steer C.....	Below S W..	4	Spur....	Spur....	20.1
Commercial T.....C-7	3½	Var.....	Var.....	.....	126	S-36x5	S-36x5d	Unit with R A.	G E....	2	4	Steer C.....	Below S W..	4	Spur....	Spur....	17.3
Commercial T.....A-7	3½	Var.....	Var.....	.....	122	S-36x6	S-36x4d	On F & R Axles	G E....	4	6	Steer C.....	Below S W..	4	Spur....	Spur....	17.3
Commercial T.....A-10	5	Var.....	Var.....	.....	132	S-36x7	S-36x5d	On F & R Axles	G E....	4	6	Steer C.....	Below S W..	4	Spur....	Spur....	20.1
Kelland.....A-H	½	3400*	Var.....	.....	106	S-36x3	S-36x3	Sep Unit.....	G E....	1	3-6	Under F.....	Below S W..	4	S-Cha...	R-Cha...	9.0
Kelland.....B-H	¾	3700*	Var.....	.....	106	S-36x3½	S-36x3½	Sep Unit.....	G E....	1	3-6	Under F.....	Below S W..	4	S-Cha...	R-Cha...	10.4
Kelland.....BT	¾	3100*	2750*	.....	102	S-34x3½	S-34x3½	Sep Unit.....	G E....	1	3-6	Under F.....	Right of S ..	4	Spur....	Heli....	11.0
Kelland.....BTS	¾-1½	3000*	Var.....	.....	102	S-34x3	S-34x3	Sep Unit.....	G E....	1	3-6	Under F.....	Right of S ..	4	Spur....	Heli....	9.5
Kelland.....CH	1	4000*	Var.....	.....	106	S-36x3½	S-36x4	Sep Unit.....	G E....	1	3-6	Under F.....	Below S W..	4	S-Cha...	R-Cha...	11.3
Kelland.....CT	1	3400*	Var.....	.....	102	S-34x3½	S-34x4	Sep Unit.....	G E....	1	3-6	Under F.....	Right of S ..	4	Heli....	Heli....	13.0
Lansden.....	½-¾	3350	Var.....	1600	108	P-32x4½	P-32x4½	Unit with R A.	G E....	1	3	In Dash.....	Below S W..	4	Herr....	Bevel...	10.0
Lansden.....	1	3750	Var.....	1850	112	P-33x5	P-33x5	Unit with R A.	G E....	1	3	In Dash.....	Below S W..	4	Herr....	Bevel...	10.0
Lansden.....	2	6750	Var.....	2250	121	C-36x4	C-36x3½d	Unit with J S..	G E....	1	3½	In Dash.....	Below S W..	5	Bevel...	R-Cha...	12.0
Lansden.....	3½	8150	Var.....	2950	133	C-36x5	C-36x5	Unit with J S..	G E....	1	4½	In Dash.....	Below S W..	5	Bevel...	R-Cha...	14.0
Lansden.....	5	10500	Var.....	3350	146	C-36x6	C-36x6d	Unit with J S..	G E....	1	5½	In Dash.....	Below S W..	5	Bevel...	R-Cha...	14.0
Milburn.....27D	¼	2925	1600	1085	105	P-33x4	P-33x4	Unit with R A.	G E....	1	4	Under S.....	Left of S	4	None...	Worm...	11.6
Milburn.....43	½-¾	3370	2195	1585	115	P-32x4½	P-32x4½	Unit with R A.	G E....	1	4½	Under F.....	.....	4	None...	Worm...	10.3
Milburn.....40	1-1¼	3910	2650	1985	128	P-32x4½	P-33x5	Unit with R A.	G E....	1	4½	.....	Right of S ...	.....	None...	Worm...	.....
O. B.....B	2	Var.....	Var.....	2650	107	S-36x4	S-36x3½d	Unit with J S..	G E....	1	.....	Under S.....	Left of S	Var	S-Cha...	S-Cha...	.....
O. B.....C	3½	Var.....	Var.....	3750	135	S-36x5	S-36x4d	Unit with J S..	G E....	1	.....	Under S.....	Left of S	Var	S-Cha...	R-Cha...	.....
O. B.....D	5	Var.....	Var.....	3950	143	S-36x6	S-36x5d	Unit with J S..	G E....	1	.....	Under S.....	Left of S	Var	S-Cha...	S-Cha...	.....
Steinmetz.....10	½	3350*	2050*	1700	108	P-32x4½	P-32x4½	Unit with R A.	Own....	1	3	Back S.....	Left of S	4	Bevel...	Spur....	13.4
Steinmetz.....15	¾	3800*	2255*	1850	114	P-33x5	P-33x5	Unit with R A.	Own....	1	3	Back S.....	Left of S	4	Bevel...	Spur....	13.4
Walker.....12	½	Var.....	Var.....	.....	104	S†-32x3	S†-32x3½	Unit with R A.	G E....	1	3	Under F.....	Below S W..	4	None...	Bevel...	5.5
Walker.....15	¾	Var.....	Var.....	.....	94	S-34x3	S-36x3½	Unit with R A.	West....	1	.....	Under S.....	Left of S	5	None...	Spur....	16.8
Walker.....22	1	Var.....	Var.....	.....	101	S-34x3½	S-36x4	Unit with R A.	West....	1	.....	Under S.....	Left of S	5	None...	Spur....	16.8
Walker.....42	2	Var.....	Var.....	.....	114	S-36x4	S-36x6	Unit with R A.	West....	1	.....	Under S.....	Left of S	5	None...	Spur....	14.6
Walker.....P	3½	Var.....	Var.....	.....	131	S-36x5	S-38x5d	Unit with R A.	West....	1	.....	Under S.....	Left of S	5	None...	Spur....	18.1
Walker.....N	5	Var.....	Var.....	.....	141	S-36x6	S-38x6d	Unit with R A.	West....	1	.....	Under S.....	Left of S	5	None...	Spur....	18.1
Walter.....HD	1	4000	2650	2200	98	S-32x3½	S-32x4	Sep Unit.....	Diehl..	1	4½	Under S.....	Left of S	5	None...	Bevel...	7.0
Walter.....EN	2	6700	3975	3100	114	S-36x4	S-36x7	Unit with J S..	G E....	1	5½	Under S.....	Right of S ..	5	Bevel...	Spur....	10.0
Walter.....	5	10100	5700	4500	150	S-36x6	S-40x6D	Unit with J S..	G E....	1	7	Under S.....	Right of S ..	5	Bevel...	Spur....	14.0
Ward.....8211	2-2¼	Var.....	Var.....	.....	88	P-32x4	P-33x4½	Unit with D S.	G E**..	1	3	Under F.....	Left of S	4	None...	Worm...	.....
Ward.....B222	2½-3	1650	Var.....	.....	91	S-32x3½	S-32x4	Unit with D S.	G E**..	1	4	Under F.....	Left of S	4	None...	Worm...	.....
Ward.....C211	3½-4	Var.....	Var.....	.....	96	S-32x3½	S-34x5	Unit with D S.	G E**..	1	4	Under F.....	Left of S	4	None...	Worm...	.....
Ward.....E111	5-6	Var.....	Var.....	.....	108	S-34x4	S-36x6	Unit with D S.	G E**..	1	5	Under S.....	Left of S	4	None...	Worm...	.....
Ward.....E211	5-6	Var.....	Var.....	.....	108	S-34x4	S-36x6	Unit with D S.	G E**..	1	5	Under F.....	Left of S	4	None...	Worm...	.....
Ward.....G111	7-8	Var.....	Var.....	.....	120	S-36x5	S-36x8	Unit with D S.	G E**..	1	6	Under S.....	Left of S	5	None...	Worm...	.....
Ward.....J111	10-11¼	Var.....	Var.....	.....	132	S-36x6	S-36x10	Unit with D S.	G E**..	1	8	Under S.....	Left of S	5	None...	Worm...	.....
Ward.....M111	14-15½	Var.....	Var.....	.....	146	S-36x7	S-40x14	Unit with D S.	G E**..	1	8	Under S.....	Left of S	5	None...	Worm...	.....

ABBREVIATIONS:
*—With battery specified in table
‡—Battery make optional
†—Pneumatics optional
Back S—Back of Seat
Below S W—Below Steering Wheel
C—Cushion
Cant—Cantilever
½ Ell—½ Elliptic
½ F—Semi-Floating
Flo—Full Floating
G. E.—General Electric
Heli—Helical Gear
Herr—Herringbone
Left of S W—Left of Steering Wheel
On F & R Axles—On Front and Rear Axles
Opt—Optional
P—Pneumatic
Plat—Platform
R Cha—Roller Chain
Rad Rods—Radius Rods
Rad & Spr—Radius Rods and Springs

Car Specifications

MOTOR					CONTROLLER			DRIVE					SPRINGS			
Make	Model	Number	Total Horse Power	Location	Make	Location	Number of Forward Speeds	Type of Final Drive	Type of Rear Axle	Total Reduction (Motor to Wheels)	Propulsion Taken by	Torque Taken by	Type Front	Type Rear	Wheels (Standard Equipment)	MAKE AND MODEL
Elw-Par	22–17	1	3	Unit with J S	Own	Under S	5	....	¾ Float	....	Springs	Springs	½ Ell	½ Ell	Art	Detroit 90
Elw-Par	31–20	1	3	Unit with J S	Own	Under F	5	....	¾ Float	....	Tor. arm	Tor. arm	½ Ell	¾ Ell	Wire	Detroit 91-3
Gen. Elec	1085	1	4	Unit with R A	Own	Under S	4	Worm	¾ Float	9.75	Springs	Tor. tube	½ Ell	F. Ca	Wire	Milburn 27-L
Own	....	1	3½	Unit with R A	Own	Under S	5	Worm	¾ Float	8.60	Springs	Tor. arm	½ Ell	½ Ell	Art	Rauch & Lang S-66
Own	....	1	3½	Unit with R A	Own	Under S	5	Worm	Float	8.60	Springs	Tor. arm	½ Ell	½ Ell	Art	Rauch & Lang B-68
Own	....	1	3½	Unit with R A	Own	Under S	5	Worm	¾ Float	8.60	Springs	Tor. arm	½ Ell	¾ Ell	Art	Rauch & Lang C-55

Unit with R. A—Unit with Rear Axle

Var—Varies according to make of battery employed

½ Ell—½ Elliptic
¾ Ell—¾ Elliptic
¾ Float—¾ Floating

½ U. H. and ½ R. C—½ under hood and ½ rear compartment
‡—Make Optional

Truck Specifications

DRIVE					SPRINGS		PERFORMANCE				BATTERY									
Type of Axle or Jackshaft	Propulsion Taken By	Torque Taken By	Steering Wheel Location	Distance from Ground to Top of Frame at Dash (Ins.)	Front	Rear	Miles per Charge		Speed in M.P.H.		Location	Make	Model	Price	Voltage	Ampere Hour Capacity	Number of Plates	Number of Cells	Number of Trays	MAKE AND MODEL
							Loaded	Light	Loaded	Light										
Flo	Springs	Springs	Left		½ Ell	Plat	Var	Var	Var	Var	Under F A	Opt								Autocar
Flo	Springs	Springs	Left		½ Ell	Plat	Var	Var	Var	Var	Under F A	Opt								Autocar
Flo	Springs	Springs	Left		½ Ell	½ Ell	Var	Var	Var	Var	Under F A	Opt								Autocar
Flo	Springs	Springs	Left		½ Ell	½ Ell	Var	Var	Var	Var	Under F A	Opt								Autocar
Flo	Springs	Springs	Left		½ Ell	½ Ell	Var	Var	Var	Var	Under F A	Opt								Autocar
Flo	Rad & Spr	Rad & Spr	Left	33¼	½ Ell	½ Ell	50	.....	13	14	Under F A	Opt								Commercial T D1
Flo	Rad & Spr	Rad & Spr	Left	33	½ Ell	½ Ell	55	.....	13	14	Under F A	Opt								Commercial T D1-5
Flo	Rad & Spr	Rad & Spr	Left	32¾	½ Ell	½ Ell	55	.....	13	14	Under F A	Opt								Commercial T B1-5
Flo	Rad & Spr	Rad & Spr	Left	33	½ Ell	½ Ell	50	.....	12	14	Under F A	Opt								Commercial T D-2
Flo	Rad & Spr	Rad & Spr	Left	35¼	½ Ell	½ Ell	45	.....	10	12	Under F A	Opt								Commercial T B-4
Dead	Rad & Spr	Rad & Spr	Left	36½	½ Ell	½ Ell	40	.....	8	10	Under F A	Opt								Commercial T C-6
Dead	Rad & Spr	Rad & Spr	Left	36¼	½ Ell	½ Ell	45	.....	8	10	Under F A	Opt								Commercial T C-7
Dead	Rad & Spr	Rad & Spr	Left	38⅛	½ Ell	½ Ell	45	.....	9	11	Under F A	Opt								Commercial T A-7
Dead	Rad & Spr	Rad & Spr	Left	38⅝	½ Ell	½ Ell	40	.....	9	11	Under F A	Opt								Commercial T A-10
½ F	Rad Rods	None	Left	36	½ Ell	½ Ell	30	40	13	15	Under F A	Edison‡	A-4	.....	73	150	4	60	12	Kelland A-H
½ F	Rad Rods	None	Left	36	½ Ell	½ Ell	35	45	12	14	Under F A	Edison‡	A-5	.....	73	187½	5	60	12	Kelland B-H
Flo	Springs	Springs	Left	30	½ Ell	½ Ell	40	50	13	15	U S & O F A	Edison‡	A-5	.....	73	187	5	60	14	Kelland BT
Flo	Springs	Springs	Left	29½	½ Ell	½ Ell	35	45	15	17	U H & U S	Edison‡	A-4	.....	73	150	4	60	11	Kelland BTS
½ F	Rad Rods	None	Left	36	½ Ell	½ Ell	40	50	11	13	Under F A	Edison‡	A-6	.....	73	225	6	60	12	Kelland CH
Flo	Springs	Springs	Left	30½	½ Ell	½ Ell	45	55	12	14	U S & O F A	Edison‡	A-6	.....	73	225	6	60	14	Kelland CT
Flo	Springs	Springs	Left	30	½ Ell	½ Ell	50	.....	15	.....	U H & U S	Opt								Lansden
Flo	Springs	Springs	Left	31	½ Ell	½ Ell	50	.....	14	.....	U H & U S	Opt								Lansden
Flo	Rad Rods	None	Left	36	½ Ell	½ Ell	50	.....	12	.....	Under F A	Opt								Lansden
Flo	Rad Rods	None	Left	39	½ Ell	½ Ell	45	.....	10	.....	Under F A	Opt								Lansden
Flo	Rad Rods	None	Left	39	½ Ell	½ Ell	40	.....	9	.....	Under F A	Opt								Lansden
Flo	Springs	Springs	Left	31½	½ Ell	Cant	50	75	20	22	U H & U S	Philco	PX	$515	80	156	13	40	2	Milburn 27D
Flo	Springs	Springs	Left		½ Ell	½ Ell	55	80	17	19	U H & U S	Philco	PMT	655	84	180	13	42	2	Milburn 43
Flo	Springs	Springs	Left		½ Ell	½ Ell	50	65	15	17	U H & U S	Philco	PMT	724	84	210	15	42	2	Milburn 40
Dead	Rad Rods	Tor Arm	Left		½ Ell	½ Ell	48	52	13	15	Under F A	Opt								O. B. B
Dead	Rad Rods	Tor Arm	Left		½ Ell	½ Ell	48	52	10	11	Under F A	Opt								O. B. C
Dead	Rad Rods	Tor Arm	Left		½ Ell	½ Ell	42	45	10	11	Under F A	Opt								O. B. D
½ F	Springs	Tor Arm	Left	34	½ Ell	½ Ell	60	70	16½	17½	U H & U S	Opt								Steinmetz 10
½ F	Springs	Tor Arm	Left	34	½ Ell	½ Ell	60	70	16½	17½	U H & U S	Opt								Steinmetz 15
¾ F	Springs	Springs	Left	25½	½ Ell	½ Ell			14	15	U H & U S	Opt								Walker 12
Flo	Springs	Springs	Left	32½	½ Ell	½ Ell	Var	Var	Var	Var	Under F A	Opt								Walker 15
Flo	Springs	Springs	Left	34	½ Ell	½ Ell	Var	Var	Var	Var	Under F A	Opt								Walker 22
Flo	Springs	Springs	Left	35	½ Ell	½ Ell	Var	Var	Var	Var	Under F A	Opt								Walker 42
Flo	Springs	Springs	Left	41	½ Ell	½ Ell	Var	Var	Var	Var	Under F A	Opt								Walker P
Flo	Springs	Springs	Left	41	½ Ell	½ Ell	Var	Var	Var	Var	Under F A	Opt								Walker N
½ F	Springs	Springs	Left	26	½ Ell	½ Ell	50	60	14	15	Under F A	Philco	WNT	661	85	180	13	42	2	Walter HD
Flo	Springs	Springs	Left	36	½ Ell	½ Ell	40	60	11	12	Under F A	Exide	MB1	1232	85	270	17	42	8	Walter EN
Flo	Springs	Springs	Left	41	½ Ell	½ Ell	40	50	10	11	Under F A	Exide	MU1	1655	85	375	23	42	12	Walter
½ F	Springs	Springs	Left	29	½ Ell	½ Ell	Var	Var	Var	Var	Under S	Opt								Ward 8211
½ F	Springs	Springs	Left	29	½ Ell	½ Ell	Var	Var	Var	Var	Under S	Opt								Ward B222
½ F	Springs	Springs	Left	31	½ Ell	½ Ell	Var	Var	Var	Var	Under S	Opt								Ward C211
½ F	Springs	Springs	Left	34⅝	½ Ell	½ Ell	Var	Var	Var	Var	Under F A	Opt								Ward E111
½ F	Springs	Springs	Left	32	½ Ell	½ Ell	Var	Var	Var	Var	Under S	Opt								Ward E211
½ F	Springs	Springs	Left	35	½ Ell	½ Ell	Var	Var	Var	Var	Under F A	Opt								Ward G111
½ F	Springs	Springs	Left	38	½ Ell	½ Ell	Var	Var	Var	Var	Under F A	Opt								Ward J111
½ F	Springs	Springs	Left	40	½ Ell	½ Ell	Var	Var	Var	Var	Under F A	Opt								Ward M111

Right of S W—Right of Steering Wheel
S—Solid
S Cha—Silent Chain
Sep Unit—Separate Unit
Steer C—Steering Column

Tor Arm—Torque Arm
U H & U S—Under hood and under seat
Under F—Under floor board
Under F A—Under frame amidships
Under S—Under Seat

Unit with D S—Unit with Drive Shaft
Unit with J S—Unit with Jackshaft
Unit with R A—Unit with Rear Axle

U S & O FA—Under seat and over frame amidships
Var—Varies according to make and capacity of battery employed
West—Westinghouse

American Truck Design Progress Shown by Analysis of Trends

ONLY a comparatively small number of new trucks have appeared on the market during the past two years and changes in the proportional representation of different features of design probably have been inffuenced more by the withdrawal of a number of makes from the market than by the introduction of new ones or the design of entirely new models by established concerns.

There has been no material change in the proportion of truck models of different capacity, though the smallest capacity, ¾ ton, has lost somewhat during the three years beginning with 1922. About one-half of all the truck models are in the intermediate capacity class, and there is also a rather large proportion of models in the 5-ton class, but the average annual sales per model are, of course, much greater in the low-carrying capacity classes.

In the table of piston displacements the great variation in any one load capacity class is notable. Thus, in the 1-1½ton class there is one truck with a piston displacement of 160 cu. in. and another one with 372 cu. in., or almost two and a half times as much. The fact that some trucks are fitted with pneumatic tires and designed to operate at express speeds, while others carry solid rubber tires and are geared for low speed, probably is responsible for this rather remarkable difference.

THE single plate clutch has gained all along the line, and most of all in the small truck delivery wagon class. In this same class of trucks there is still a fair proportion of cone clutches being used, while in the large sizes it has practically disappeared. On the other hand, in the largest size of trucks, where cone clutches are not used at all any more, the multiple-disk-in-oil type has a fair and growing representation. The multiple dry disk clutch remains in the lead on heavy trucks and the single dry plate clutch has gained the lead in the class of small trucks.

ONE of the most interesting comparisons of features of truck design always has been that relating to final drives. The only notable change apparent in this year's compilation is that in the ¾-ton truck class the worm drive is losing out to the bevel gear drive. This is explained by the fact that the introduction of spiral bevel gears has made it possible to get a higher reduction ratio by bevel gearing and that increase in truck speeds has reduced the reduction ratio required, hence there is no longer any difficulty in getting the required reduction in a single step by bevel gears.

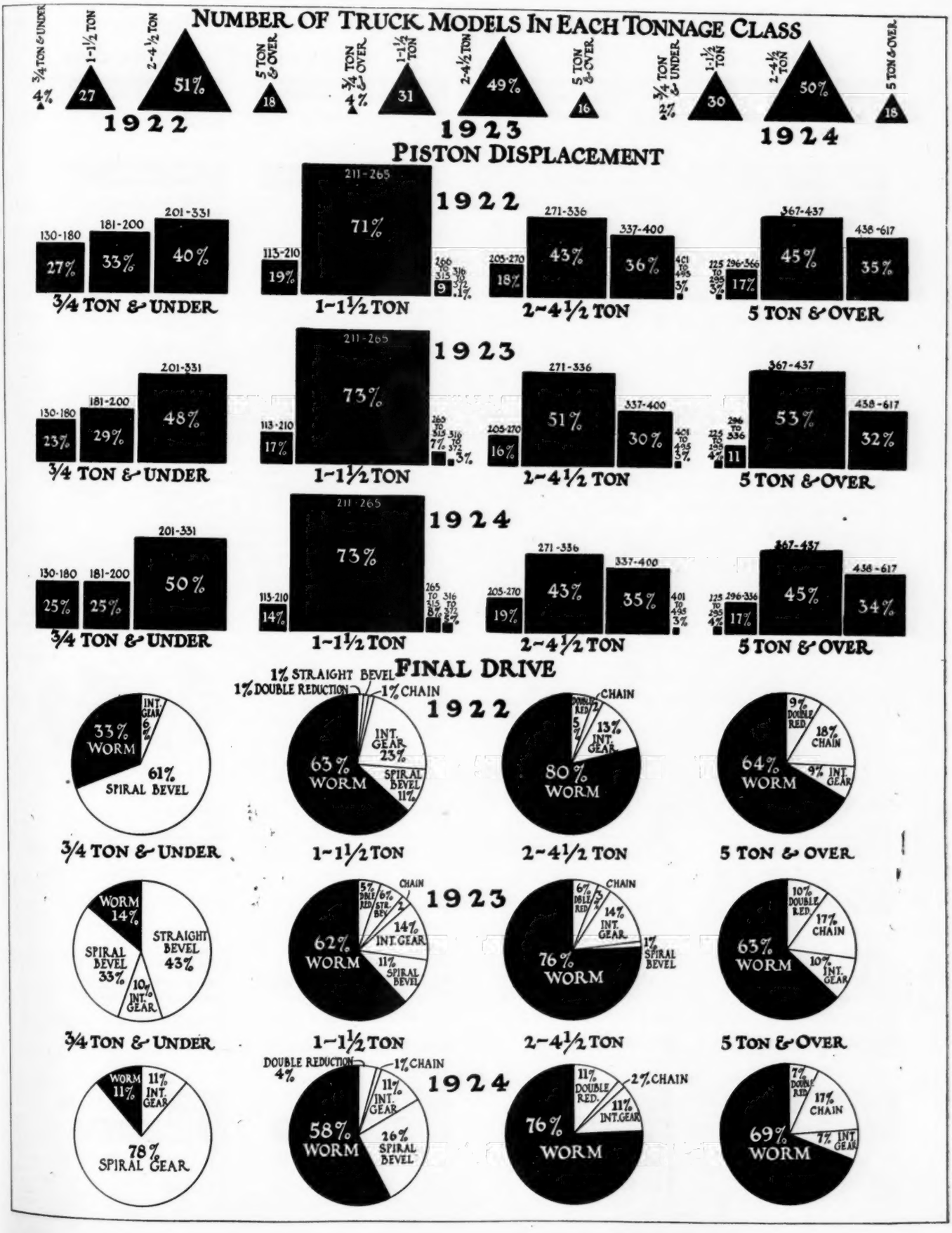
As regards brakes, there is an evident tendency in the heavier trucks to use one transmission brake, that is, a brake whose retarding torque is multiplied before it reaches the rear wheels.

Pneumatic tires are gaining rapidly in the 1-1½-ton class, the proportion of models in this class regularly fitted with pneumatics having increased from 40 to 54 per cent, in the case of front tires and that of those regularly fitted with solids having dropped from 57 to 10 per cent in two years. In the larger sizes there are very few trucks that are regularly furnished with pneumatic tires, but the proportion of those on which pneumatics are furnished optionally is increasing.

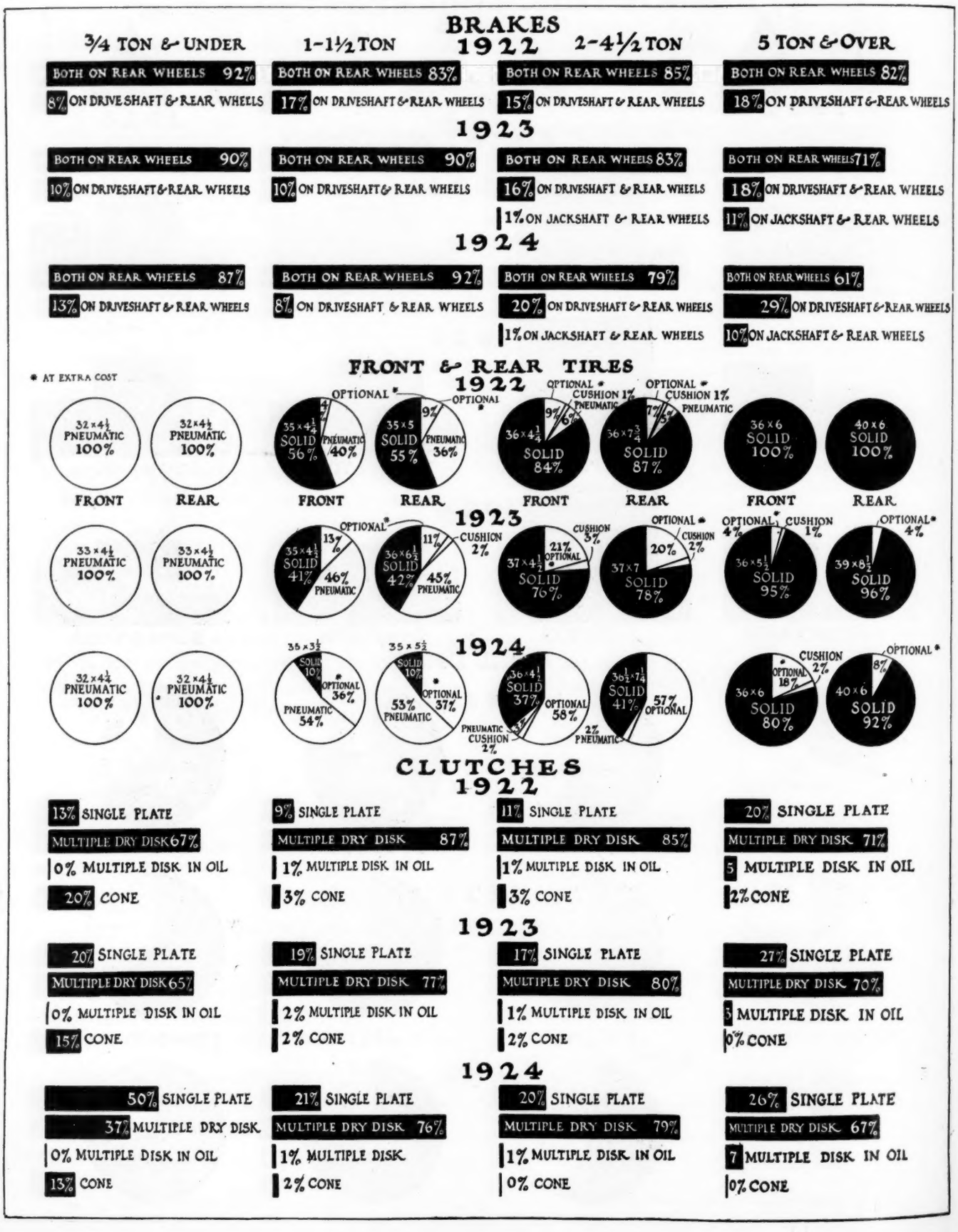
Power Take Off and Electrical Equipment

	¾ Tons and Under Per Cent	1-1½-1¾ Tons Per Cent	2-2½-3-3½-4-4½ Tons Per Cent	5 Tons and Over Per Cent
Generator: Standard equipment	78	50	16½	11¼
Optional at extra cost	22	42	67	76¼
No provision	0	8	16½	12½
Starter: Standard equipment	78	48	10	7
Optional at extra cost	22	41	72	78
No provision	0	11	18	15
Power Take Off: Standard equipment	0	4	7	13
Optional at extra cost	0	62	87	74
No provision	0	34	6	13

Recent Trends in American Truck Design



Recent Trends in American Truck Design



American Gasoline Truck Specifications

For specially designed Motor Bus chassis see pages 420-421

Those Truck Chassis which are sold and recommended for Passenger Transportation are designated in the following table by the ‡‡ reference sign in front of the name.

MAKE AND MODEL	GENERAL					ENGINE			ELECTRICAL SYSTEM				TRANSMISSION				REAR AXLE			BRAKES		MISCELLANEOUS			
				Tires					Ignition				Clutch		Gearset								Steering Gear		
	Tons Capacity	Wheelbase (Ins.) §	Track. Rear Axle (Ins.)	Type and Size. Front (Ins.)	Type and Size. Rear (Ins.)	Make	Number of Cylinders. Bore and Stroke (Ins.)	Carbureter Make	Make	Current Source	Generator and Starter Make	Governor Type	Make	Type	Make	Power Take-off	Make and Model	Final Drive	Type	Service—Location and Type	Emergency—Location	Front Axle Make	Make	Type	Wheels Type
‡‡Acme	2(	129	56	P-34x5	P-34x5	Cont..	4-3¾x5	Rayf....	Eise..	M	Bosc‡.	Cen..	B&B.	S P..	Cot...	O.	Tim...6250	Wo.	½F..	I-R...	R.	Tim...	Ros...	C&L..	S-W..
‡‡Acme	3(	129	56	S*-34x3½	S*-34x5	Cont..	4-3¾x5	Zeni....	Eise..	M	Delc‡.	Cen..	B&B.	S P..	Cot...	O.	Tim...6352	Wo.	½F..	I-R...	R.	Tim...	Ros...	C&L..	S-W..
‡‡Acme	40	2	141	56	S*-34x3½	S*-34x5	Cont.	4-3¾x5	Zeni....	Eise..	M	Delc‡.	Cen..	B&B.	S P..	Cot...	O.	Tim...6460	Wo.	½F..	I-R...	R.	Tim. .	Ros...	C&L..	S-W..
‡‡Acme	40L	2	147	58	S*-34x3½	S*-34x6	Cont.	4-4½x5½	Zeni....	Eise..	M	Delc‡.	Cen..	B&B.	S P..	Cot...	O.	Tim...6460	Wo.	½ F.	I-R...	R.	Tim...	Ros...	S&N..	S-W..
‡‡Acme	60I	3	156	58½	S*-35x4	S*-35x7	Cont.	4-4½x5½	Zeni....	Eise..	M	Delc‡.	Cen..	B&B.	S P..	Cot...	O.	Tim...6560	Wo.	F F.	I-R...	R.	Tim...	Ros...	S&N..	S-W..
Acme	6(	3	152	58½	S*-35x4	S*-35x7	Cont.	4-4½x5½	Zeni....	Eise..	M	Delc‡.	Cen..	B&B.	S P..	Cot...	O.	Tim...6560	Wo.	F F.	I-R...	R.	Tim...	Ros...	S&N..	S-W..
Acme	90I	1½	176¾	65½	S*-36x5	S*-40x5d	Cont.	4-4x6	Rayf....	Eise..	M	†Delc‡	Cen..	B&B.	S P..	Cot...	O.	Tim...6666	Wo.	F F.	I-R...	R.	Tim...	Ros...	S&N..	S-W..
Acme	9(	1½	168	65½	S*-36x5	S*-40x5d	Cont.	4-4½x5½	Zeni....	Eise..	M	Delc‡.	Cen..	B&B.	S P..	Cot...	O.	Tim...6666	Wo.	F F.	I-R...	R.	Tim...	Ros...	S&N..	S-W..
Acme	125	2½	180	69½	S-36x6	S-40x6d	Cont.	4-4½x6	Rayf....	Eise..	M	†Delc‡	Cen..	B&B.	S P..	Cot...	O.	Tim...6760	Wo.	F F.	I-R...	R.	Tim...	Ros...	S&N..	S-W..
Am. La France	2R	2½	160½	60½	S-33x4	S-36x7	Own..	4-4¼x6	Stro....	Spli..	M	West‡.	Cen..	Own..	M D..	Own..	O.	Own.....		DR.	F F.	E-D.	R.	Own..	Ros...	C&L..	S-W..
Am. La France	3R	3½	164½	66½	S-36x5	S-33x5d	Own..	4-4½x6	Stro....	Spli..	M	West‡.	Cen..	Own..	M D..	Own..	O.	Own.....		Wo.	F F.	E-D.	R.	Own..	Ros...	S&N..	S-W..
Am. La France	5R	5	....	67	S-36x6	S-40x6d	Own..	4-4½x6	Stro....	Spli..	M	West‡.	Cen..	Own..	M D..	Own..	O.	Own.....		Wo.	F F.	E-D.	R.	Own..	Ros...	S&N..	S-W..
‡‡Armleder	40B	1½	148	58	S*-34x3½	S*-34x6	Buda..	4-4½x5½	Zeni....	Bosc..	M	West‡.	Hyd..	B-L...	M D..	B-L...	O.	Tim...6460	Wo.	½ F.	E-R...	R.	Tim...	Ros...	S&N..	S-W..
‡‡Armleder	40C	1½	148	58	S*-34x3½	S*-34x6	Cont..	4-4½x5½	Zeni....	Bosc	M	None..	Hyd..	B-L...	M D..	B-L...	O.	Tim...6460	Wo.	½ F.	I-R...	R.	Tim...	Ros...	S&N..	S-W..
‡‡Armleder	21	1½	148	58	S*-34x3½	S*-34x6	Buda.	4-4 x5½	Zeni....	Bosc	M	West‡.	Hyd.	Ful..	M D..	Ful...	O.	Tim...6460	Wo.	½ F.	I-R...	R.	Tim...	Ros...	S&N..	S-W..
‡‡Armleder	41B	2½	182	58½	S*-33x4	S*-33x8	Buda.	4-4½x6	Zeni....	Bosc.	M	West‡	Hyd.	B-L...	M D..	B-L...	O.	Tim...6580	Wo.	F F.	I-R...	R.	Tim...	Ros...	S&N..	S-W..
‡‡Armleder	HWB	2½	148	58½	S*-33x4	S*-33x8	Buda.	4-4½x5½	Zeni....	Bosc.	M	West‡	Hyd.	B-L...	M D..	B-L...	O.	Tim...6580	Wo.	F F.	I-R...	R.	Tim...	Ros...	S&N..	S-W..
‡‡Armleder	HWC	2½	148	58½	S*-33x4	S*-33x8	Cont..	4-4½x5½	Zeni....	Bosc.	M	None..	Hyd..	B-L...	M D..	B-L...	O.	Tim...6580	Wo.	F F.	I-R...	R.	Tim...	Ros...	S&N..	S-W..
‡‡Armleder	KWB	3½	156	65½	S*-33x5	S*-33x5d	Buda.	4-4½x6	Zeni....	Bosc.	M	West‡	Hyd.	B-L...	M D..	B-L...	O.	Tim...6666	Wo.	F F.	E-D.	R.	Tim...	Ros...	S&N..	S-W..
‡‡Armleder	KWC	3½	156	65½	S*-33x5	S*-33x5d	Cont..	4-4½x5½	Zeni....	Bosc.	M	None..	Hyd..	B-L...	M D..	B-L...	O.	Tim...6666	Wo.	F F.	E-D.	R.	Tim...	Ros...	S&N..	S-W..
Atterbury	20R	1½	144	58½	S*-31x4	S*-31x6	Cont..	4-3½x5	Zeni....	Eise..	M	Delc‡.	Cen..	Ful..	M D..	Ful...	O.	Tim...6460	Wo.	½ F.	I-R...	R.	Tim...	Ros...	S&N..	S-W..
Atterbury	22C	2½	156	58½	S*-33x4	S*-33x4d	Cont..	4-4½x5½	Zeni....	Eise..	M	Delc‡.	Cen..	B-L...	M D..	B-L...	O.	Tim...6580	Wo.	F F.	I-R...	R.	Tim...	Ge n.	W&W.	S-W..
Atterbury	22D	3½	174	67½	S*-33x5	S*-40x6d	Cont..	4-4½x5½	Zeni....	Eise..	M	Delc‡.	Cen..	B-L...	M D..	B-L...	O.	Tim...6666	Wo.	F F.	I-R...	R.	Tim...	Gem.	W&W.	S-W..
Atterbury	8E	5	168	69½	S-33x6	S-40x7d	Cont..	4-4¾x6	Zeni....	Eise..	M	†Delc.	Cen..	B-L...	M D..	B-L...	O.	Tim...6760	Wo.	F F.	I-R...	R.	Tim...	Gem.	W&W.	S-C..
‡‡Autocar	21-F&G	1½	97	58	S*-31x4	S*-31x6	Own..	2-4¾x11½	Stro....	Bosc.	M	†L-N‡	Non..	Own...	S P..	Own..	O.	Own.....		D.R	F F.	E-R.	R.	Own..	Ros...	S&N..	S-W..
‡‡Autocar	27H-K&KA	2	114	60	S*-31x5	S-33x8	Own..	4-4 x5½	Stro	Bosc.	M	L-N‡.	Hyd..	Own..	S P..	Own..	O.	Own.....		D.R	F F.	I-R...	R.	Own..	Ros...	S&N..	S-W..
‡‡Autocar	26M-L&LA	4	120	65	S-31x6	S-33x6d	Own..	4-4½x5½	Stro....	Bosc.	M	L-N‡.	Hyd..	Own..	S P..	Own..	O.	Own.....		D R	F F.	I-R...	R.	Own..	Ros...	S&N..	S-W..
Available	JH	1½	115	56	S*-33x3½	S*-33x5	Herc..	4-4 x5	Zeni....	Bosc.	M	Bosc‡.	Cen..	B-L...	M D..	B-L...	O.	Tim...6460	Wo.	½ F.	I-R...	R.	Tim...	Ros...	C&L..	S-W..
Available	JH	2½	153	58	S*-35x4	S*-33x8	Herc..	4-4 x5	Zeni....	Bosc.	M	Bosc‡.	Cen..	B-L...	M D..	B-L...	O.	Tim...6580	Wo.	F F.	I-R...	R.	Tim...	Ros...	C&L..	S-W..
Available	JH	3½	178	65½	S*-35x5	S*-40x5d	Herc..	4-4½x5½	Stro....	Bosc.	M	Bosc‡.	Cen..	B-L...	M D..	B-L...	O.	Tim...6666	Wo.	F F.	I-R...	R.	Tim...	Ros...	C&L..	S-W..
Available	JH	5	190	69½	S-36x6	S-40x12	Herc..	4-5 x6	Stro....	Bosc.	M	†Bosc‡	Cen..	B-L...	M D..	B-L...	O.	Tim...6760	Wo.	F F.	I-R...	R.	Tim...	Ros...	C&L..	S-C..
[illegible]																										
‡‡Bessemer	G	1	124	56	P-35x5	P-35x5	Cont..	4-3½x5	Stro....	Bosc.	M	Biju..	Non..	Ful..	M D..	Ful...	O.	Tor.....A	I G.	½ F.	E-R...	R.	Shu...	Ros...	S&N..	S-W..
‡‡Bessemer	J2	2½	158	60	S-33x4	S-33x4d	Cont..	4-4½x5½	Stro....	Eise..	M	†Eise ..	Cen..	B&B.	S P..	B-L...	N	L-M..7250	....	½ F.	I-R...	....	Shu...	Ros...	S&N..	S-W..
‡‡Bessemer	K2	4	175	67½	S-33x5	S-33x10	Cont..	4-4½x5½	Stro....	Eise..	M	Eise†.	Cen..	B&B.	S P..	B-L...	O.	Tor.....E	I G.	½ F.	.....	....	Shu...	Ros...	S &N..	S-C..
‡‡Bethlehem	KN	1	125	56	P-35x5	P-35x5	Own..	4-3½x5	Zeni....	Bosc.	M	G & D	Non..	B&B.	S P..	Det...	N	Eat...1000	S B	½ F.	I-R...	R.	Eat..	Lav..	S&N..	S-W..
‡‡Bethlehem	GN	2	137½	57½	S-31x4	S-31x6	Own..	4-4 x5½	Zeni....	Bosc.	M	G & D	Cen..	B&B.	S P..	Det...	O.	Wis...60A	D R	½ F.	I-R...	R.	She..	Lav..	S&N..	S-W..
‡‡Bethlehem	HN	3	145	59½	S-36x4	S-33x8	Own..	4-4 x5½	Zeni....	Bosc.	M	G & D	Cen..	Ful..	M D.	Ful...	O.	Wis...88E	D R	½ F.	I-R...	R	She..	Lav..	S&N..	S-C..
Bridgeport	A	1½	144	60	S*-31x4	S*-31x6d	Buda.	4-3½x5½	Zeni....	Eise..	M	Bosc‡.	Non..	B-L...	M D..	B-L...	O.	Tim...6460	Wo.	½ F.	I-R...	R.	Shu...	Ros...	W&W.	S-W..
Bridgeport	B	2½	155	60	S*-33x4	S*-33x8	Buda.	4-4½x5½	Zeni....	Eise..	M	Bosc‡.	Non..	B-L...	M D..	B-L...	O.	Tim...6560	Wo.	F F.	I-R...	R.	She..	Ros...	W&W.	S-W..
Bridgeport	C	3½	175	72	S*-35x6	S*-31x12	Buda.	4-4½x6	Zeni....	Eise..	M	Bosc‡.	Non..	B-L...	M D..	B-L...	O.	Tim...6666	Wo.	F F.	I-R...	R.	She..	Ros...	W&W.	S-W..
Brockway	E	1	135	56	P-33x5	P-33x5	Wisc..	4-4 x5	Zeni....	Spli..	M	L-N..	Suc..	B-L...	M D..	B-L...	O.	Col..52000	S B.	F F.	E-R.	R.	Col..	Gem..	W&W.	S-W..
Brockway	S	1½	140	56	S*-33x4	S*-33x6	Wisc..	4-4 x5	Zeni....	Spli..	M	L-N‡	Suc..	B-L...	M D..	B-L...	O.	Tim...6460	Wo.	½ F.	I-R...	R.	Tim ..	Gem..	W&W	S-W..
Brockway	K	2½	153	58½	S*-33x4	S*-33x8	Cont..	4-4½x5½	Stro....	Spli..	M	L-N‡.	Hyd..	B-L...	M D..	B-L...	O.	Tim...6560	Wo.	F F.	I-R...	R.	Tim ..	Gem..	W&W	S-W..
Brockway	R	3½	164	65½	S*-35x5	S-33x5d	Cont..	4-4½x5½	Stro....	Spli..	M	L-N‡.	Hyd..	B-L...	M D..	B-L...	O.	Tim...6666	Wo.	F F.	I-R...	R.	Tim..	Gem..	W&W	S-C..
Brockway	T	5	174	69½	S-33x5	S-40x14	Cont..	4-4½x6	Stro....	Spli..	M	L-N‡.	Hyd..	B-L...	M D..	B-L...	O.	Tim...6760	Wo.	F F.	I-R...	R.	Tim..	Gem..	W&W.	S-W..
Buffalo	9	2	138	....	S*-31x5	S*-33x7	Herc..	4-4 x5½	Zeni....	Bosc.	M	G & D	Cen..	B & B	S P..	Det...	..	Wis...60	D R	½ F.	.....	..	She..	Ros...	.....	.....
Buffalo	6	3	155	....	S*-34x5	S*-35x5d	Herc..	4-4¼x5½	Stro....	Bosc..	M	Bosc..	Cen ..	Cov...	M D..	.....	..	She...W21	Wo.	½ F.	.....	..	She..	Ros...	.....	.....
Case	TR	2	144	56	P-36x6	P-38x7	Own..	4-4½x5½	Benn....	Eise..	M	Eise‡.	Hyd..	T-D..	S P..	Own..	O	Tor...C139	I G.	Dd.	E-R.	R.	Tor..	Opt...	.....	S-W..
‡‡Chevrolet		1	120	56	P-31x4	P-31x4½	Own..	4-3 1/16x4	{Holl.. {Zeni..	Remy.	B.	Remy.	Non..	Own..	Co....	Own..	N	Own.....	S B.	½ F	E-R...	R.	Own..	Own..	W&W.	S-W..
Chicago	C	1½	145½	60	S*-36x3½	S*-36x6	Herc..	4-4 x5	Zeni....	Apol..	M	†Bosc‡	Cen..	B-L...	M D..	B-L...	O.	Huck...15	D R	F F.	I-R...	R.	Tim ..	Gem..	W&W.	S-W..
Chicago	C	2½	156	....	S*-36x4	S*-36x8	Herc..	4-4 x5	Zeni....	Apol..	M	†Bosc‡	Cen..	B-L...	M D..	B-L...	O	Huck...1	D R	F F.	I-R...	R.	Tim...	Gem..	W&W.	S-W..
Chicago	C	3½	162	....	S*-36x5	S*-35x10	Herc..	4-4½x5½	Zeni....	Apol..	M	†Bosc‡	Cen..	B-L...	M D..	B-L...	O.	Huck...35	D R	F F.	I-R...	R.	Tim...	Gem..	W&W.	S-C..
Clinton	20	1	150	56	P-30x5	P-30x5	Buda.	4-3½x5½	Zeni....	Apol..	M	Bosc..	Non..	B-L...	M D..	B-L...	O.	Tim...6250	Wo.	½ F	I-R...	R.	Tim...	Ros...	⅛L.	S-C..
Clinton	45	1½	163	58	S*-31x4	S*-31x4d	Buda.	4-4 x5½	Zeni....	Apol..	M	†Bosc.	Suc..	B-L...	M D..	B-L...	O.	Tim...6460	Wo.	½ F	I-R...	R.	Tim...	Ros...	⅛L.	S-W..
‡‡Clinton	65	2½	184	58½	S*-31x5	S*-31x5d	Buda.	4-4½x5½	Zeni....	Apol..	M	Bosc..	Suc..	B-L...	M D..	B-L...	O.	Tim...6560	Wo.	F F.	I-R...	R.	Tim...	Ros...	⅛L.	S-W..
Clinton	90	3½	190	65½	S*-36x5	S-36x6d	Buda	4-4½x6	Zeni....	Apol..	M	†Bosc.	Suc..	B-L...	M D..	B-L...	O.	Tim...6666	Wo.	F F.	I-R...	R.	Tim...	Ros...	⅛L.	S-W..
Clinton	120	5	204	69½	S-36x6	S-36x7d	Buda.	4-5 x6½	Zeni....	Apol..	M	Bosc‡.	Suc..	B-L...	M D..	B-L...	O.	Tim...6760	Wo.	F F.	I-R...	R.	Tim...	Ros...	⅛L.	S-W..
Clydesdale	10A	1½	153	56	P-31x5	P-31x5	Cont..	4-3½x5	Zeni....	Bosc.	B.	Bosc..	Non..	B & B	S P..	B-L...	O.	Tim...6350	Wo.	½ F	I-R...	R.	Sta...	Ros...	C&L..	D-P..
Clydesdale	10	1½	154	56	P-34x5	P-31x5	Cont..	4-3½x5	Zeni....	Bosc.	B	Bosc..	Non..	B & B	S P..	B-L...	O.	Tim...5511	Wo.	½ F	I-R...	R.	Sta...	Ros...	C&L..	D-P..
Clydesdale	9	2	160	56	S-36x4	S-36x6	Cont..	4-3½x5	Zeni....	Bosc.	M	Bosc‡.	Cen..	B-L...	M D.	B-L...	O.	Tim...6352	Wo.	½ F	I-R...	R.	Soe...	Ros...	C&L..	S-W..
Clydesdale	8	3½	156	58	S-36x4	S-36x7	Cont..	4-4½x5½	Zeni....	Bosc.	M	Bosc	Cen..	B-L...	M D.	B-L...	O.	Tim...6460	Wo.	½ F	I-R...	R.	Tim...	Ros...	⅛N.	D-C..
Clydesdale	6X	3½	163	58½	S-36x4	S-36x8	Cont..	4-4½x5½	Zeni....	Bosc.	M	Bosc‡.	Cen..	B-L...	M D..	B-L	O	Tim...6560	Wo.	F F.	I-R...	R.	Tim...	Ros...	⅛N.	D-C..
Clydesdale	6	4½	163	58½	S-36x5	S-36x5d	Cont..	4-4½x5½	Zeni....	Bosc.	M	Bosc‡.	Cen..	B-L...	M D..	B-L...	O.	Tim...6560	Wo.	F F.	I-R...	R.	Tim...	Ros...	S&N..	D-C..
Clydesdale	4	6½	177	67	S-36x6	S-36x6d	Cont..	4-4½x6	Zeni....	Bosc..	M	Bosc‡.	Cen..	B-L...	M D..	B-L...	O.	Tim...6666	Wo.	F F.	I-R...	R.	Tim...	Ros...	S&N..	D-C..
Clydesdale	4X	6½	177	67	S-36x5	S-40x5d	Cont..	4-4½x5½	Zeni....	Bosc..	M	Bosc‡.	Cen..	B-L...	M D..	B-L...	O.	Tim...6666	Wo.	F F.	I-R...	R.	Tim...	Ros...	⅛N.	D-C..
Clydesdale	2	9½	176	69½	S-36x7	S-40x7d	Cont..	4-4¾x6	Zeni....	Bosc..	M	Bosc‡.	Cen..	B-L...	M D..	B-L...	N	Tim...6760	Wo.	F F.	I-R...	R.	Tim ..	Ros...	⅛N..	D-C..

ABBREVIATIONS—TRUCKS:

*—Pneumatics Optional at extra cost
†—Optional at extra cost
**—Equipped with starter only
†—Equipped with generator only
§§—Taken from 1923 specifications
‡‡—Recommended for bus use
††—Truck Tractor
|—Standard Wheelbase

A-K—Atwater-Kent
A-L—Auto-Lite
Apol—Apollo
B—Battery
B&B—Borg & Beck
Benn—Bennett
Berl—Berling
Biju—Bijur
B-L—Brown-Lipe
Bosc—Bosch
BPS—Bevel, Pinion and Sector
C—Cushion
Cam—Campbell
Cart—Carter
Cen—Centrifugal
Ch—Chain
C&L—Cam and Lever
Cla—Clark
Co—Cone
Col—Columbia
Con— } Continental
Cont— }
Cov—Covert
Cot—Cotta
Conn—Connecticut
D—Drive Shaft
D-C—Disk-Cast Steel
Dd—Dead
D-P—Disk-Pressed Steel
Det—Detroit
Del—Detlaff
Delc—Delco
Dod—Dodge
D-R—Double Reduction
D-W—Disk Wood
Dur—Durston
Dyn— } Dyneto
Dyne— }
Eat—Eaton
E—Standard Equipment
E-D—External Driveshaft
E-F—Front wheels only
E-J—External Jackshaft
Eis— } Eisemann
Eise— }
E-R—External Rear Wheels
Ensi—Ensign
FF—Full Floating
½F—Semi Floating
¾F—Three Quarter Floating
Fli—Flint
Ful—Fuller
G&D—Gray & Davis
Gem—Gemmer
HaS—Hall Scott
Here—Hercules
HeS—Hele-Shaw
Hink—Hinkley
Holl—Holley
Hoo—Hoosier
H-S—Herschell-Spillman
Hyd—Hydraulic
I-A—All four wheels
I-G—Internal Gear
I-R—Internal Rear Wheel
Jac—Jacox
John—Johnson
Lav—Lavine
L-N—Leece-Neville
Lyco—Lycoming
M—Magneto
Mast—Master
Marv—Marvel
MD—Multiple Dry Disk
Mec—Mechanics
Midw—Midwest
MO—Multiple Disk in Oil
Mun—Muncle
M&E—Merchant and Evans
N-E—North East
N—No provision
Non—None
O—Optional at extra cost
Opt—Optional
P—Pneumatics
Pla—Planetary
R—Rear Wheels
Rayf—Rayfield
Re— } Remy
Rem— }
Ros—Ross
Rus—Russell
S—Solid
Sal—Salisbury
SB—Spiral Bevel
Sche—Schebler
S-C—Spoked-Cast Steel
S-D—Steel-Disk
She—Sheldon
Shu—Shuler
S-M—Spoked-Malleable Iron
S&N—Screw and nut
Spe—Special
Sta—Standard
Stew—Stewart
Spli—Splitdorf
S-P—Single Plate
Suc—Suction
S-W—Spoked Wood
Stro—Stromberg
T-B—Straight Bevel
T-D—Twin Disk
Till—Tillotson
Tim—Timken
Tor—Torbenson
Ves—Vesta
Vul—Vulcan
Wal—Walker
War—Warner
Wauk—Waukesha
We— } Westinghouse
Wes— }
Wis } Wisconsin
Wisc }
West—Westinghouse
Woh—Wohlrab
Wo—Worm
W&S—Worm and Sector
W&W—Worm and Wheel
Zeni—Zenith

American Gasoline Truck Specifications—Continued

MAKE AND MODEL	GENERAL					ENGINE			ELECTRICAL SYSTEM				TRANSMISSION				REAR AXLE			BRAKES		MISCELLANEOUS			
				Tires					Ignition				Clutch		Gearset								Steering Gear		
	Tons Capacity	Wheelbase (Ins.) §	Track, Rear Axle (Ins.)	Type and Size, Front (Ins.)	Type and Size, Rear (Ins.)	Make	Number of Cylinders, Bore and Stroke (Ins.)	Carbureter Make	Make	Current Source	Generator and Starter Make	Governor Type	Make	Type	Make	Power Take-off	Make and Model	Final Drive	Type	Service—Location and Type	Emergency—Location	Front Axle Make	Make	Type	Wheels, Type
Columbia H	1½	140	....	S-34x4	S-34x6	Hink.	4-3¾x5½	Stro.	Spli.	M	Bosch	Cen.	Det.	M D.	Det.		Vul.	Wo.	F F.			Shu.	Own.		
Columbia G	2½	118	....	S-36x4	S-36x10	Hink.	4-4 x5½	Stro.	Spli.	M	Bosch	Cen.	Det.	M D.	Det.		Vul.	Wo.	F F.			Shu.	Own.		
Columbia K	3	150	....	S-36x5	S-36x12	Hink.	4-4½x5½	Stro.	Spli.	M	Bosch	Cen.	Det.	M D.	Det.		Vul.	Wo.	F F.			Shu.	Own.		
§§Commerce 9	¾	126	56	P-32x4½	P-32x4½	Cont.	4-3½x5	Zeni.	Bosch	B.	Pijur.	Non.	Det.	Co.	Det.	N	Sal. D16	S B.	¾ F	E-R.	R.	Sal.	Jac.	S&N.	D-P.
§§Commerce 25	2½	156	59½	S*-36x6	S*-40x8	Cont.	4-4½x5½	Zeni.	Eise.	M	Bijur.	Non.	B-L.	M D.	B-L.	N	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-W.
§§Commerce 14	1½	....	....	S*-36x3½	S*-36x5	Cont.	4-3½x5						B-L.	M D.	B-L.		Tim.	Wo.							
Concord E	1	135	....	P-34x5	P-36x6	Buda.	4-4 x5½	Zeni.	Eise.	M	West.	Non.	B-L.	M D.	B-L.	O.	Tim. 6352	Wo.	½ F	I-R.	R.	Tim.	Ros.	C&L.	D-C.
Concord J	3	150	....	S-36x4	S-36x8	Buda.	4-4½x5½	Zeni.	Eise.	M	Opt‡.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-W.
‡‡Corbitt S	¾	130	56	P-34x4½	P-34x4½	H-S.	4-3½x5	Stro.	Spli.	M	Dyne	Non.	B-L.	M D.	B-L.	O.	She. W1002	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-W.
Corbitt E	1	130	56	S*-34x3½	S*-34x4	Cont.	4-3½x5	Stro.	Eise.	M	Bijur‡.	Cen.	B-L.	M D.	B-L.	O.	She. W1002	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-W.
Corbitt B	1½	140	57	S*-34x3½	S*-34x5	Cont.	4-3½x5	Stro.	Eise.	M	Bosc‡.	Cen.	B-L.	M D.	B-L.	O.	She. W1501	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-W.
Corbitt C	2	148	62	S*-36x4	S*-36x7	Cont.	4-4½x5½	Stro.	Eise.	M	Bosc‡.	Cen.	B-L.	M D.	B-L.	O.	She. W103	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-W.
Corbitt B	2½	152	60	S*-36x4	S*-36x8	Cont.	4-4½x5½	Stro.	Eise.	M	Bosc‡.	Cen.	B-L.	M D.	B-L.	O.	She. W21	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-W.
Corbitt R	2½	160	60	S*-36x4	S*-36x8	Cont.	4-4½x5½	Stro.	Eise.	M	Bosc‡.	Cen.	B-L.	M D.	B-L.	O.	She. W21	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-C.
Corbitt A	3½	178	69¾	S-36x5	S-36x10	Cont.	4-4½x5½	Stro.	Eise.	M	Bosc‡.	Cen.	B-L.	M D.	B-L.	O.	She. W32	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-C.
Corbitt AA	5	178	69¾	S-36x6	S-40x12	Cont.	4-4¼x6	Stro.	Eise.	M	Bosc‡.	Cen.	B-L.	M D.	B-L.	O.	She. W51	Wo.	½ F	I-R.	R.	Sae.	Ros.	S&N.	S-C.
Day-Elder AN	1½	128	56	S*-34x3½	S*-34x4	Buda.	4-3¾x5½	Zeni.	Eise.	M	Bosc‡ Wes‡	Suc.	B-L.	M D.	B-L.	O.	Tim. 6352	Wo.	½ F	I-R.	R.	Col.	Gem.	W&W.	S-C.
Day-Elder BN	2	144	58	S*-34x3½	S*-34x5	Cont.	4-3¾x5	Zeni.	Eise.	M	Bosc‡ Wes‡	Suc.	B-L.	M D.	B-L.	O.	Tim. 6460	Wo.	½ F	I-R.	R.	Col.	Gem.	W&W.	S-C.
Day-Elder DN	2½	144	58½	S*-36x4	S*-36x7	Cont.	4-4½x5½	Zeni.	Eise.	M	Bosc‡ Wes‡	Suc.	B-L.	M D.	B-L.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Col.	Gem.	W&W.	S-C.
Day-Elder CN	3	150	58½	S*-36x4	S*-36x8	Buda.	4-4½x5½	Zeni.	Eise.	M	Bosc‡ Wes‡	Suc.	B-L.	M D.	B-L.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Gem.	W&W.	S-C.
Day-Elder FN	4	165	65¾	S*-36x5	S*-36x5d	Cont.	4-4½x5½	Zeni.	Eise.	M	Bosc‡ Wes‡	Suc.	B-L.	M D.	B-L.	O.	Tim. 6666	Wo.	F F.	I-R.	R.	Tim.	Gem.	W&W.	S-C.
Day-Elder EK	5	162	69½	S-36x5	S-40x6d	Cont.	4-3¾x6	Zeni.	Eise.	M	Bosc‡ Wes‡	Suc.	B-L.	M D.	B-L.	O.	Tim. 6760	Wo.	F F.	I-R.	R.	Tim.	Gem.	W&W.	S-C.
Dearborn E	1	132	58	P-35x5	P-35x5	Buda.	4-3¾x5½	Stro.	Conn.	B.	Bosch.	Non.	Ful.	M D.	Ful.	O.	Wis. 800G	Wo.	½ F	I-R.	R.	Tor.	Ros.	S&N.	S-W.
Dearborn 48	2	148	58	S-31x4½	S-31x7	Hero.	4-4 x5	Stro.	Bosch.	M	Bosc‡.	Non.	Ful.	M D.	Ful.	O.	Wis. 800J	Wo.	½ F	I-R.	R.	Shu.	Ros.	S&N.	..
§§Denby 31	¾	130	56	P-31x4½	P-31x4½	Cont.	4-3½x5	Stro.	Eise.	M	Remy.	Non.	Ful.	M D.	Ful.	O.	Cla. B300 Col. 5100	IG. SB.	¾ F	E-R.	R.	She.	Ros.	S&N.	S-W.
§§Denby 33	2	136	56	P-35x5	P-38x7	Cont.	4-3½x5	Stro.	Eise.	M	Rem‡.	Non.	Ful.	M D.	Ful.	O.	Cla. 1D	I G.	½ F	E-D.	R.	Tim.	Ros.	S&N.	S-W.
§§Denby 35	3	155	58	S-36x4	S-36x7	Cont.	4-4½x5½	Stro.	Eise.	M	Eise‡.	Cen.	Ful.	M D.	Ful.	O.	Cla. 504	I G.	½ F	E-D.	R.	Sta.	Ros.	S&N.	D-C.
§§Denby 27	4	170	70	S-36x5	S-36x5d	Cont.	4-4½x5½	Stro.	Eise.	M	None.	Cen.	Own.	M D.	War.	O.	Cla. 3D	I G.	½ F	E-R.	R.	Sta.	Ros.	W&S.	S-C.
§§Denby 210	5	170	70	S-36x6	S-40x6d	Cont.	4-4½x5½	Stro.	Eise.	M	None.	Cen.	Own.	M D.	War.	O.	Cla. 5D	I G.	½ F	I-R.	D	Sta.	Ros.	W&S.	S-C.
‡‡Diamond T 75	¾	130	56	P-33x5	P-33x5	Here.	4-4 x5	Zeni.	Apol.	M	†A-L.	Opt.	Cov.	M D.	Cov.	O.	Col. 52021	S B.	F F.	E-R.	R.	Col.	Gem.	W&W.	S-W.
Diamond T 03	1	132	57½	S*-36x3½	S*-36x4	Hink.	4-3½x5½	Stro.	Bosch.	M	None.	Cen.	Cov.	M D.	Cov.	O.	Wis. 800G	Wo.	F F.	I-R.	R.	Own.	Gem.	W&W.	S-W.
Diamond T T	1½	154	58	S-36x3½	S-36x5	Hink.	4-3½x5½	Stro.	Bosch.	M	Opt‡.	Cen.	Cov.	M D.	Cov.	O.	Tim. 6460	Wo.	F F.	I-R.	R.	Tim.	Gem.	W&W.	S-W.
Diamond T U2	2½	144	58½	S*-36x4	S*-36x8d	Hink.	4-4 x5½	Stro.	Bosch.	M	None.	Cen.	Cov.	M D.	Cov.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Gem.	W&W.	S-W.
Diamond T K	3½	170	65½	S*-36x5	S*-36x5d	Hink.	4-4½x5½	Stro.	Bosch.	M	None.	Cen.	Cov.	M D.	Cov.	O.	Tim. 6666	Wo.	F F.	I-R.	R.	Tim.	Gem.	W&W.	S-C.
Diamond T EL	5	180	69½	S-36x6	S-40x6d	Hink.	4-4½x5½	Stro.	Bosch.	M	None.	Cen.	Cov.	M D.	Cov.	O.	Tim. 6760	Wo.	F F.	I-R.	R.	Tim.	Gem.	W&W.	S-C.
Diamond T S	5	170	69½	S-36x6	S-40x6d	Hink.	4-4¼x6	Stro.	Bosch.	M	Opt‡.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6760	Wo.	F F.	I-R.	R.	Tim.	Gem.	W&W.	S-C.
§§Doane	2½	147	77	S*-36x5	S*-36x7	Wauk.	4-4½x5½	Stro.	Bosch.	M	None.	Cen.	B-L.	M D.	B-L.	N	Own.	Ch.	Dd.	E-D.	R.	Own.	Lav.	S&N.	S-C.
§§Doane	3½	172	87	S-36x5	S-36x10	Wauk.	4-4½x5½	Stro.	Bosch.	M	None.	Cen.	B-L.	M D.	B-L.	N	Own.	Ch.	Dd.	E-D.	R.	Own.	Lav.	S&N.	S-C.
§§Doane 6		178	96	S-36x6	S-40x12	Wauk.	4-5 x6½	Stro.	Bosch.	M	None.	Cen.	B-L.	M D.	B-L.		Own.	Ch.		E-D.	R.	Own.	Lav.	S&N.	S-C.
Dodge 1924	¾	116	56	P-32x4	P-32x4	Own.	4-3½x4½	Stew.	N-E.	B.	N-E.	Non.	Own.	M D.	Own.	N	Own.	S B.	½ F	E-R.	R.	Own.	Own.	W&W.	S-W.
Derris K4	2½	144	58½	S*-36x4	S*-36x7	Own.	4-4½x5½	Stro.	Bosch.	M	West.	Cen.	Own.	M D.	War.	O.	Tim. 6560	Wo.	FF.	I-R.	R.	Tim.	Ros.	S&N.	S-C.
Derris K7	3½	174	65½	S-36x5	S-36x10	Own.	4-4½x5½	Stro.	Bosch.	M	West.	Cen.	Own.	M D.	War.	O.	Tim. 6666	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-C.
§§Duplex GH	1½	138	58	P-35x5	P-36x6	Buda.	4-3½x5½	Zeni.	West.	B.	West.	Non.	Cov.	M D.	Cov.	N	She. W1501	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-W.
§§Duplex A	2	145	62	P-35x5	P-38x7	Hink.	4-4x5½	Stro.	West.	B.	West.	Non.	Cov.	M D.	Cov.	N	She. W103	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-W.
§§Duplex AC	2½	160	58½	S-31x5	S-36x8	Hink.	4-4 x5½	Stro.	Eise.	M	None.	Non.	B-L.	M D.	B-L.	O.	Vul. 4	Wo.	½ F	I-R.	R.	Vul.	Ros.	S&N.	S-W.
§§Duplex E	3½	130	60	S-36x8	S-36x8	Buda.	4-4½x5½	Sche.	Eise.	M	None.	Cen.	B-L.	M D.	B-L.	O.	Own.	I G.	Dd.	E-D.	R.	Own.	Woh.	S&N.	S-W.
§§Eagle 100	2	130	60	S*-34x4	S*-34x7	Buda.	4-3½x5½	Zeni.	Eise.	M	Bosc‡.	Opt.	Cov.	M D.	Cov.	O.	Rus. 6000I	I G.	½ F	E-R.	R.	Col.	Lav.	W&W.	S-W.
§§Eugol A	1	135	....	P-34x5	P-34x5	Buda.	4-3¾x5½	Stro.	West.	B.	West.	Non.	War.	M D.	War.		Tim. 6250	Wo.	½ F	I-R.	R.	Tim.	Ros.	S&N.	S-W.
Fageol 2		136	56	S-34x4	S*-31x6	Wauk.	4-3¾x5½	Zeni.	Spli.	M	Opt‡.	Cen.	B-L.	M D.	Own.	E.	Tim. 6460	Wo.	½ F	I-R.	R.	Std.	Ros.	S&N.	D-C.
Fageol 30-60	3	150	58½	P-36x6	P-36x6	Ha-S.	4-4½x5½	Zeni.	Delc.	B.	Delc.	Cen.	B-L.	M D.	Own.	O.	Tim. 6666	Wo.	F F.	I-R.	R.	Tim.	Ros.	W&S.	D-P.
Fageol 3		150	58½	S-34x4	S-35x7	Wauk.	4-4½x5½	Zeni.	Spli.	M	Opt‡.	Cen.	B-L.	M D.	Own.	E.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	D-C.
Fageol 4		172	65½	S-36x3	S-36x5d	Wauk.	4-4½x6½	Zeni.	Spli.	M	Opt‡.	Cen.	B-L.	M D.	Own.	N	Tim. 6660	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	D-C.
Fageol 6		172	69½	S-36x6	S-40x6d	Wauk.	4-4½x6½	Zeni.	Spli.	M	Opt‡.	Cen.	B-L.	M D.	Own.	E.	Tim. 6760	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	D-C.
§§Federal R2	1	132	56	P-33x5	P-33x5	Cont.	4-3½x5	Zeni.	Eise.	M	Remy.	Non.	B & B.	S P.	Det.	O.	Tim. 6250	Wo.	½ F	I-R.	R.	Tim.	Gem.	W&W.	D-P.
§§Federal S	1½	144	56	S*-33x3½	S*-36x5	Cont.	4-3½x5	Zeni.	Eise.	M	†Rem.	Non.	B & B.	S P.	Own.	O.	Tim. 6252	Wo.	½ F	I-R.	R.	Own.	Gem.	W&W.	S-W.
§§Federal U2	2½	156	58½	S-36x4	S-36x7	Cont.	4-4½x5½	Zeni.	Eise.	M	Remy.	Cen.	B & B.	S P.	Det.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Own.	Gem.	W&W.	S-W.
§§Federal W2	3½	156	65½	S-36x5	S-36x5d	Cont.	4-4½x5½	Zeni.	Eise.	M	None.	Cen.	B & B.	S P.	War.	N	Tim. 6660	Wo.	F F.	I-R.	R.	Tim.	Gem.	W&W.	D-C.
§§Federal X2	5	163	69½	S-36x6	S-40x6d	Cont.	4-4¼x6	Zeni.	Eise.	M	†Rem.	Cen.	B & B.	S P.	War.	O.	Tim. 6760	Wo.	F F.	I-R.	R.	Tim.	Gem.	W&W.	D-C.
‡‡Ford T	1	124	56	P-30x3½	P-32x4½	Own.	4-3½x4	Own.	Own.	B.	Own‡.	Non.	Own.	M D.	Own.	N	Own.	Wo.	½ F	E-D.	R.	Own.	Own.	Pla.	S-W.
F. W. D. B	3	124	56	S*-36x6	S*-36x6	Wisc.	4-4½x5½	Stro.	Eise.	M	N-E‡.	Cen.	He-S.	M O.	Cot.	O.	Own.	T B	F F	E-D.	R.	Own.	Ros.	S&N.	S-C.
‡‡Garford 15	1	132	56	P-34x5	P-34x5	Buda.	4-3½x5½	Stro.	A-K.	B.	A-K.	Cen.	B & B.	S P.	Own.	N	Sta. 602	Wo.	½ F	I-R.	R.	Own.	Gem.	W&W.	S-W.
Garford 25B	1½	135	58	S*-36x4	S*-36x5	Buda.	4-3¾x5½	Stro.	Spli.	M	A-K‡ A-L‡	Cen.	Own.	M D.	Own.	O.	Tim. 6460	Wo.	½ F	I-R.	R.	Own.	Ros.	S&N.	S-W.
Garford 70H	2½	144	58½	S*-36x4	S*-36x8	Buda.	4-4½x5½	Stro.	Spli.	M	A-K‡.	Cen.	Own.	M D.	Own.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-W.
Garford 80	4	162	65½	S*-36x5	S*-36x5d	Buda.	4-4¼x6	Stro.	Spli.	M	A-K‡.	Cen.	Own.	M D.	Own.	O.	Tim. 6666	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-C.
Garford 68D	5	162	69½	S*-36x6	S*-40x6d	Buda.	4-5 x6½	Stro.	Spli.	M	West‡.	Cen.	Own.	M D.	Own.	O.	Tim. 6760	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-C.
Garford 151A	5	167	77	S-36x6	S-40x6d	Buda.	4-5 x6½	Stro.	Spli.	M	We‡. A-K‡	Cen.	Own.	M D.	Own.	O.	Own.	Ch.	Dd.	E-D.	R.	Tim.	Ros.	S&N.	D-C.
§§Gary F	1	132	56	S-36x3½	S-36x5	Buda.	4-3¾x5½	Mast.	Eise.	M	We‡. Ves‡.	Suc.	Ful.	M D.	Ful.	O.	Tim. 6352	Wo.	½ F	I-R.	R.	Tim.	Ros.	S&N.	S-W.
§§Gary I	2	144	58	S-36x3½	S-36x7	Buda.	4-4 x5½	Zeni.	Eise.	M	We‡. Ves‡.	Suc.	Ful.	M D.	Ful.	O.	Tim. 6460	Wo.	½ F	I-R.	R.	Tim.	Ros.	S&N.	S-W.
§§Gary J	2½	148	58½	S-36x4	S-36x8	Buda.	4-4½x5½	Zeni.	Eise.	M	We‡. Ves‡.	Suc.	Ful.	M D.	Ful.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-W.
§§Gary JO	2½	150	58½	P-36x6	P-40x8	Buda.	4-4½x6	Zeni.	Eise.	M	We‡. Ves‡.	Suc.	Ful.	M D.	Ful.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-W.
§§Gary K	3½	162	65½	S-36x5	S-40x10	Buda.	4-4½x6	Zeni.	Eise.	M	We‡. Ves‡.	Suc.	B-L.	M D.	B-L.	O.	Tim. 6660	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	D-C.
§§Gary M	5	182	69½	S-36x6	S-40x12	Buda.	4-5x6½	Zeni.	Eise.	M	We‡. Ves‡.	Suc.	B-L.	M D.	B-L.	O.	Tim. 6760	Wo	F F.	I-R.	R.	Tim.	Ros.	S&N.	D-C.
‡‡G. M. C. K16	1	132	55½	P-34x5	P-34x5	Own.	4-3½x5½	Marv.	Remy.	M	†Rem.	Cen.	Own.	M D.	Own.	O.	Own.	S B	¾ F	E-R.	R.	Own.	Jac.	S&N.	S-W.
††G. M. C. K41T	2	127	58½	S-36x4	S-36x8	Own.	4-4 x5½	Marv.	Remy.	M	†Rem‡	Cen.	Own.	M D.	Own.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Jac.	S&N.	S-C.
G. M. C. K41	2	146	58½	S*-36x4	S*-36x7	Own.	4-4 x5½	Marv.	Remy.	M	Rem‡.	Cen.	Own.	M D.	Own.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Jac.	S&N.	S-C.
††G. M. C. K71T	3½	138	68	S-36x5	S-36x12	Own.	4-4½x6	Marv.	Remy.	M	Rem‡.	Cen.	Own.	M D.	Own.	O.	Tim. 6666	Wo.	F F.	I-R.	R.	Tim.	Jac.	S&N.	S-C.
G. M. C. K71	3½	163	88½	S*-36x5	S*-40x5d	Own.	4-4½x6	Marv.	Remy.	M	Rem‡.	Cen.	Own.	M D.	Own.	O.	Tim. 6666	Wo.	F F.	I-R.	R.	Tim.	Jac.	S&N.	S-C.
††G. M. C. K101T	5	138	69½	S-36x5	S-36x7d	Own.	4-4½x6	Marv.	Remy.	M	Rem‡.	Cen.	Own.	M D.	Own.	O.	Tim. 6760	Wo.	F F.	I-R.	R.	Tim.	Jac.	S&N.	S-C.
G. M. C. K101	5	163	69½	S-36x5	S-40x5d	Own.	4-4½x6	Marv.	Remy.	M	Re‡.	Cen.	Own.	M D.	Own.	O.	Tim. 6760	Wo.	F F.	I-R.	R.	Tim.	Jac.	S&N.	S-C.

For abbreviations see page 427.

American Gasoline Truck Specifications—Continued

MAKE AND MODEL	GENERAL					ENGINE			ELECTRICAL SYSTEM				TRANSMISSION				REAR AXLE			BRAKES		MISCELLANEOUS			
				Tires					Ignition				Clutch		Gearset								Steering Gear		
	Tons Capacity	Wheelbase (Ins.) §	Track, Rear Axle (Ins.)	Type and Size, Front (Ins.)	Type and Size, Rear (Ins.)	Make	Number of Cylinders, Bore and Stroke (Ins.)	Carbureter Make	Make	Current Source	Generator and Starter Make	Governor Type	Make	Type	Make	Power Take-off	Make and Model	Final Drive	Type	Service—Location and Type	Emergency—Location	Front Axle Make	Make	Type	Wheels Type
‡Graham..... BA	1	140	56	P-33x4½	P-34x5	Dod..	4-3⅞x4½	Stew....	N-E..	B.	N-E..	Non..	Dod..	M D..	Dod..	O.	Own.....	S B	½ F	E-R...	R.	Dod..	Dod..	W&W.	S-W..
‡Graham..... CA	1½	140	56	P-33x4½	P-34x5	Dod..	4-3⅞x4½	Stew....	N-E..	B.	N-E..	Non..	Dod..	M D..	Dod..	O.	Own.....	S B	½ F	E-R...	R.	Dod..	Dod..	W&W.	S-W..
‡Gramm-Bernstein..... 10	1½	129	56	P-33x5	P-33x5	Lyco..	4-3½x5	Zeni....	Opt...	B.	A-L...	Non..	Mun..	M D..	Mun..	N	Sal... 1483	S B	¾ F	E-R...	D	Sal..	Ros..	W&S.	D-P..
Gramm-Bernstein..... 15	1½	138	56½	S*-36x3½	S*-36x5	Cont..	4-3½x5	Stro....	Opt...		†N-E..	Non..	Ful..	M D..	Ful..	N	Cla.....	I G.	Dd.	I-R...	R.	Col..	Ros..	W&S.	S-W..
Gramm-Bernstein..... 65	1½	138	56½	S*-36x3½	S*-36x5	Cont..	4-3½x5	Stro....	N-E..	B.	†N-E..	Non..	Ful..	M D..	Own..	N	Sta.....	Wo.	½ F	E-B...	R.	Col..	Ros..	W&S.	S-W..
Gramm-Bernstein..... 125	2½	144	60	S*-36x4	S*-36x7	Cont..	4-4½x5½	Stro....	Opt...	B.	†N-E.	Cen..	Ful..	M D..	Own..	O.	She.. W103	Wo.	½ F	E-D...	R.	Col..	Ros..	W&S.	S-W..
Gramm-Bernstein..... 30	3	150	61	S*-36x5	S*-36x10	Cont..	4-4½x5½	Stro....	Eise...	M	†N-E..	Cen..	Ful..	M D..	Own..	O.	She.. W21	Wo.	½ F	E-D...	R.	She...	Ros..	W&S.	S-C...
Gramm-Bernstein..... 40	4	156	68½	S-36x5	S-36x10	Cont..	4-4½x5½	Stro....	Eise...	M	†N-E..	Cen..	Ful..	M D..	Own..	O.	She.. W32	Wo.	½ F	E-D...	R.	She...	Ros..	W&S.	S-C...
Gramm-Bernstein..... 50	5	168	75	S-36x6	S-40x12	Cont..	4-4½x6	Stro....	N-E..	B.	‡N-E†	Cen..	Own..	M D..	Own..	O.	She.. W51	Wo.	½ F	E-D...	R.	She...	Ros..	S&N..	S-C...
Gray.....	1	120	56	P-30x3½	P-30x3½	Own..	4-3¼x4	Scoe....	West..	B.	West..	Non..	Own..	S P...	Own..	N	Tim.. 513	S B.	....	E-R...	....	Tim...	Own..	.....	S-W..
Hahn..... B2	1	....	56	P-34x5	P-34x5	Here..	4-4 x5	Stro....	Delc..	B.	Delc..	Non..	B-L...	M D..	B-L...	N	Tim.....	S B.	¾ F	E-R...	R.	Tim..	Ros...	S&N..	S-C...
‡Hahn..... K	2	140	56	S*-36x4	S*-36x7	Cont..	4-4½x5½	(Stro... Zeni...	(Bosc.. Delc..	M B.	Delc‡.	Cen..	B-L...	M D..	B-L...	E.	Tim...6460	Wo.	½ F	I-R...	R.	Tim..	Ros...	S&N..	S-C...
‡Hahn..... L	3	149	58	S*-36x4	S*-36x8d	Cont..	4-4½x5½	(Stro... Zeni...	(Bosc.. Delc..	M B.	Delc‡.	Cen..	B-L...	M D..	B-L...	E.	Tim...6560	Wo.	F F.	I-R...	R.	Tim..	Ros...	S&N..	S-C...
‡Hahn..... M	5	152	66	S*-36x5	S*-36x12	Cont..	4-4½x5½	(Stro... Zeni...	(Bosc.. Delc..	M B.	Delc‡.	Cen...	B-L...	M D..	B-L...	E.	Tim...6666	Wo.	F F.	I-R...	R.	Tim..	Ros...	S&N..	S-C...
Hahn..... N	6	174	66	S-36x5	S-40x12	Cont..	4-4¾x6	Zeni....	Bosc..	M	†Delc‡	Cen...	B-L...	M D..	B-L...	E.	Tim...6760	Wo	F F.	I-R...	R.	Tim..	Ros...	S&N..	S-C...
Hal-Fur..... D	6	136	58	P-34x5	P-36x6	Hink..	4-3½x5½	Zeni....	Apol..	M	Bosc‡.	Cen..	B-L...	M D..	B-L...	N	Tim..6342	Wo.	½ F	I-R...	R.	Tim..	Gem.	W&W.	S-C...
Hal-Fur..... G	1½	150	58	P-34x5	P-38x7	Hink..	4-4 x5½	Zeni....	Apol..	M	Bosc‡.	Cen..	B-L...	M D..	B-L...	N	Tim..6460	Wo.	½ F	I-R...	R.	Tim..	Gem.	W&W.	S-C...
Hal-Fur..... B	2½	168	58	P-36x6	S*-36x10	Hink..	4-4½x5½	Zeni....	Apol..	M	Bosc‡.	Cen..	Del..	M D..	Own..	O.	Tim..6560	Wo	F F.	I-R...	R.	Tim..	Gem.	W&W.	S-C...
Hal-Fur..... F	3½	180	66	S*-36x5	C*-36x12d	Hink..	4-4½x5½	Zeni....	Apol..	M	Bosc‡.	Cen..	Del..	M D..	Own..	O.	Tim..6660	Wo	F F.	I-R...	R.	Tim..	Gem.	W&W.	S-C...
Harvey..... WOA	2	160	59½	S*-34x4	S*-34x7	Buda..	4-4½x5½	Stro....	Eise...	M	None..	Suc...	Ful..	M D..	Ful..	N	She.. W103	Wo.	½ F	I-R...	R.	She...	Ros...	S&N..	S-C...
Harvey..... WFB	2½	160	58	S-36x4	S-36x8	Buda..	4-4½x5½	Stro....	Eise...	M	None..	Suc...	Ful..	M D..	B-L...	N	She.. W21	Wo.	½ F	I-R...	R.	She...	Ros...	S&N..	S-C...
Harvey..... WHB	3½	160	69½	S*-36x6	S*-36x6	Buda..	4-4½x6	Stro....	Eise...	M	None..	Suc...	Ful..	M D..	B-L...	N	She.. W32	Wo.	½ F	I-R...	R.	She...	Ros...	S&N..	S-C...
†Harvey..... WFT	6	125	58	S-36x4	S-36x8	Buda..	4-4½x5½	Stro....	Eise...	M	None..	Suc...	Ful..	M D..	B-L...	N	She.. W21	Wo	½ F	I-R...	R.	She...	Ros...	S&N..	S-C...
†Harvey..... WHT	10	125	58	S-36x4	S-36x8	Buda..	4-4½x5½	Stro....	Eise...	M	None..	Suc...	Ful..	M D..	B-L...	N	She.. W21	Wo	½ F	I-R...	R.	She...	Ros...	S&N..	S-C...
Hawkeye..... K	1½	148	56	P-34x5	S*-38x7	Buda..	4-3½x5½	Zeni....	Eise...	M	Bosc‡.	Cen..	Ful..	M D..	Ful..	N	Cla.....1D	I G.	Dd.	E-R...	R.	Col...	Ros...	S&N..	D-W..
Hawkeye..... M	2	148	58	S*-36x4	S*-36x6	Buda..	4-4½x5½	Zeni....	Eise...	M	Bosc‡.	Cen..	Ful..	M D..	Ful..	O.	Cla.....2D	I G.	Dd.	E-R...	D	Shu...	Ros...	S&N..	S-W..
Hawkeye..... N	3½	170	68	S*-36x5	S*-36x10	Buda..	4-4½x6	Zeni....	Eise...	M	Bosc‡.	Cen..	Ful..	M D..	Cot...	O.	Cla.....3D	I G.	Dd.	E-R...	R.	Shu...	Ros...	S&N..	D-C...
‡Hendrickson..... O	1½	Opt.	....	S-36x4	S-36x5	Buda..	4-3½x5½	Stro....	Spli...	M	None..	Non..	Ful..	M D..	Ful..	O.	Tim...6460	Wo	½ F	I-R...	R.	Tim..	Ros...	S&N..	....
‡Hendrickson..... N	3	Opt.	....	S-36x4	S-36x7	Buda..	4-4½x5½	Stro....	Spli...	M	None..	Hyd..	Ful..	M D..	Ful..	O.	Tim...6560	Wo	F F.	I-R...	R.	Tim..	Ros...	S&N..	D-C...
‡Hendrickson..... M	4	Opt.	....	S-36x5	S-36x10	Buda..	4-4½x5½	Stro....	Spli...	M	None..	Opt...	Ful..	M D..	Ful..	O.	Tim...6660	Wo	F F.	I-R...	R.	Tim..	Ros...	S&N..	D-C...
‡Hendrickson..... K	5	Opt.	....	S-36x6	S-40x12	Wauk.	4-5 x6	Stro....	Spli...	M	None..	Cen...	Ful..	M D..	Ful..	O.	Tim...6760	Wo	F F.	I-R...	R.	Tim..	Ros...	S&N..	D-C...
‡Hug..... T	1½	118	56	P-34x5	P-34x5	Buda..	4-3½x5½	Zeni....	Spli...	M	None..	Non..	Ful..	M D..	Ful..	O.	Cla.....	I G.	½ F	E-R...	D	Col...	Ros...	S&N..	S-W..
‡Indiana..... 11	1	128½	56	P-31x5	P-34x5	Here..	4-4 x5	Zeni....	A-L...	B	A-L...	Non..	B & B.	S P...	Mun..	N	Cla.. B307	S B	½ F	I-R...	R.	Sal...	Ros...	C&L..	D-P...
‡Indiana..... 15	1½	146	56	S*-34x3½	S*-34x6	Here..	4-4 x5	Zeni....	Eise...	M	A-L‡.	Cen...	B & B.	S P...	B-L...	O.	She.W1501	Wo	½ F	I-R...	R.	She...	Ros...	C&L..	S-W..
‡Indiana..... 20	2	150	59½	S*-36x4	S*-36x7	Own..	4-4½x5½	Stro....	Eise...	M	(Rem‡ Wet‡.	Cen...	B & B.	S P...	B-L...	O.	She.. W103	Wo	½ F	I-R...	R.	She...	Woh.	S&N..	S-W..
‡Indiana..... 25	2½	156½	58	S*-36x4	S*-36x8	Own..	4-4½x5½	Stro....	Eise...	M	(Rem‡ Wet‡.	Cen...	B & B.	S P...	B-L...	O.	She.. W21	Wo	½ F	I-R...	R.	She...	Woh.	S&N..	S-W..
‡Indiana..... 26	3	159	58	S*-36x4	S*-36x8	Own..	4-4½x5½	Stro....	Eise...	M	(Rem‡ Wet‡.	Cen...	B & B.	S P...	B-L...	O.	She.. W21	Wo	½ F	I-R...	R.	She...	Woh.	S&N..	S-W..
‡Indiana..... 35	3½	160	69½	S*-36x5	S*-36x10	Own..	4-4½x5½	Stro....	Eise...	M	(Rem‡ Wet‡.	Cen...	B & B.	S P...	B-L...	O.	She.. W32	Wo	½ F	I-R...	R.	She...	Woh.	S&N..	S-C...
Indiana..... 40	4	160	69½	S-36x5	S-40x12	Wauk.	4-4½x6½	Stro....	Eise...	M	West‡.	Cen...	B & B.	S P...	B-L...	O.	She.. W32	Wo	½ F	I-R...	R.	She...	Woh.	S&N..	S-C...
‡Indiana..... 51	5	170	73½	S*-36x6	S*-40x12	Wauk.	4-5 x6½	Stro....	Eise...	M	West‡.	Cen...	B & B.	S P...	B-L...	O.	She.. W51	Wo	½ F	I-R...	R.	She...	Woh.	S&N..	S-C...
International..... S	1	124	56	P-32x4½	Lyco..	4-3½x5	Ensi....	Conn..	B.	A-L...	Non..	Mun..	M D..	Mun..	N	Tor... 750	I G.	F F.	E-R...	R.	Tor...	CAS..	W&W.	S-W..
International..... 43	2	130	57½	S*-36x4	S*-36x7	Own..	4-3½x5	Own....	Bosc..	M	Rem‡.	Cen...	Own..	M D..	Own..	O.	Own.....	I G.	F F.	I-R...	D	Own..	Own..	W&W.	S-W..
International..... 63	3	140	61½	S*-36x5	S*-36x8	Own..	4-4½x5	Own....	Bosc..	M	Rem‡.	Cen...	Own..	M D..	Own..	O.	Own.....	I G.	F F.	I-R...	D	Own..	Own..	W&W.	S-W..
International..... 103	5	160	67½	S-36x5	S-40x14	Own..	4-4½x5	Own....	Bosc..	M	Rem‡.	Cen...	Own..	M D..	Own..	O.	Own.....	I G.	F F.	I-R...	D	Own..	Own..	W&W.	S-C...
Kenworth..... N	1½	142	59½	S*-36x4	S*-36x7	Buda..	4-4 x5½	Stro....	Bosc..	M	†Bosc.	Opt...	B & B.	S P...	Cot...	O.	She.. W103	Wo	½ F	I-R...	R.	She...	Ros...	S&N..	S-W..
Kenworth..... KS	2½	160	60	S*-36x4	S*-36x8	Buda..	4-4½x5½	Stro....	Bosc..	M	†Bosc.	Opt...	B & B.	S P...	Cot...	O.	She.. W21	Wo	½ F	I-R...	R.	She...	Ros...	S&N..	S-C...
Kenworth..... L	3½	170	64	S*-36x5	S*-40x12	Buda..	4-4½x6	Stro....	Bosc..	M	†Bosc.	Opt...	B & B.	S P...	Cot...	O.	She.. W32	Wo.	Dd.	I-R...	R.	She...	Ros...	C&L..	S-C...
‡Keystone.....	2	144	60	P-34x5	P-38x7	Buda..	4-3½x5½	Zeni....	Berl...	M	Bosc‡.	Cen...	Ful..	M D.	Ful..	N	Rus...6000	I G.	F F.	I-R...	R.	Tor...	Ros...	W&W.	S-W..
Kimball..... AB	2	Opt.	58	S*-36x4	S*-36x8	Wisc..	4-4 x6	Zeni....	Spli...	M	(Spli‡. Wet‡.	Cen...	B-L...	M D..	B-L...	O.	Tim...6460	Wo.	½ F	I-R...	R.	Tim..	Ros...	S&N..	S-C...
Kimball..... AC	2½	Opt.	58½	S*-36x5	S*-36x5d	Wisc..	4-4½x6	Zeni....	Spli...	M	(Spli‡. Wet‡.	Cen...	B-L...	M D..	B-L...	O.	Tim...6560	Wo	F F.	I-R...	R.	Tim..	Ros...	S&N..	S-C...
Kimball..... AF	4	Opt.	66½	S*-36x6	S*-40x7d	Wisc..	4-4¾x6	Zeni....	Spli...	M	(Spli‡. Wet‡.	Suc...	B-L...	M D..	B-L...	O.	Tim...6666	Wo	F F.	I-R...	R.	Tim..	Ros...	S&N..	S-C...
Kimball..... AM	4	172	66½	S-36x6	S-40x7d	Wisc..	4-4½x6	Zeni....	Spli...	M	(Spli‡. Wet‡.	Cen...	B-L...	M D..	B-L...	O.	Tim...6660	Wo	F F.	I-R...	R.	Tim..	Ros...	S&N..	S-C...
Kimball..... AF	5	Opt.	69½	S-36x6	S-40x7d	Wisc..	4-5 x6	Zeni....	Spli...	M	(Spli‡. Wet‡.	Cen...	B-L...	M D..	B-L...	O.	Tim...6760	Wo	F F.	I-R...	R.	Tim..	Ros...	S&N..	S-C...
‡K-Z.....	¾	125	56	P-33x5	P-33x5	Cont..	4-3⅜x5	Stro....	Bosc..	M	Bosc..	Non..	B-L...	M D..	B-L...	O.	Tim...5311	S B.	½ F	I-R...	R.	Tim..	Gem.	W&W.	S-W..
‡K-Z.....	1	134	56	S-34x3½	S-34x5	Cont..	4-3⅜x5	Stro....	Bosc..	M	Bosc‡.	Suc...	B-L...	M D..	B-L...	O.	Tim...6352	Wo.	½ F	I-R...	R.	Tim..	Gem.	W&W.	S-W..
‡K-Z.....	1½	134	58	S-34x4	S-34x6	Cont..	4-3⅜x5	Stro....	Eise...	M	Bosc‡.	Suc...	B-L...	M D..	B-L...	O.	Tim...6460	Wo.	½ F	I-R...	R.	Tim..	Gem.	W&W.	S-W..
‡K-Z.....	2½	150	58	S-36x5	S-36x8	Cont..	4-4½x5½	Stro....	Eise...	M	Bosc‡.	Suc...	B-L...	M D..	B-L...	O.	Tim...6560	Wo	F F.	I-R...	R.	Tim..	Gem.	W&W.	S-W..
‡K-Z.....	3½	162	65½	S-36x5	S-36x10	Cont..	4-4½x5½	Stro....	Bosc..	M	Bosc‡.	Suc...	B-L...	M D..	B-L...	O.	Tim...6660	Wo	F F.	I-R...	R.	Tim..	Lav...	S&N..	S-W..
Kissel.....	5	162	69½	S-36x6	S-40x12	Cont..	4-4½x6	Stro....	Bosc..	M	None..	Cen...	B-L...	M D..	B-L...	O.	Tim...6760	Wo	F F.	I-R...	R.	Tim..	Lav...	S&N..	S-C...
Kissel.....	1	140	56	P-34x5	P-34x5	Own..	4-3⅞x5½	Stro....	Remy.	B.	Remy.	Cen...	War..	M D..	War..	O.	Tim...6352	Wo	F F.	I-R...	R.	Tim..	Jac..	S&N..	S-W..
Kissel.....	1½	152	57	S*-36x3½	S*-36x6	Own..	4-3⅞x5½	Stro....	Eise...	M	Rem‡.	Cen...	War..	M D..	War..	O.	She.W1501	Wo.	½ F	I-R...	R.	She...	Jac..	S&N..	S-W..
Kissel.....	2½	168	58½	S*-36x4	S*-36x7	Own..	4-4½x5½	Stro....	Eise...	M	Rem‡.	Cen...	War..	M D..	War..	O.	Tim...6560	Wo.	F F.	I-R...	R.	Tim..	Ros...	S&N..	S-W..
Kissel.....	4	168	69½	S-36x5	S-36x5d	Own..	4-4½x5½	Stro....	Eise...	M	Rem‡.	Cen...	War..	M D..	War..	O.	She.. W31	Wo.	½ F	I-R...	R.	She...	Ros...	S&N..	S-C...
‡Kleiber.....	1	130	56	S-34x3½	S-34x6	Cont..	4-3⅜x5	Stro....	Bosc..	M	Bosc‡.	Non..	B-L...	M D..	B-L...	N	Tim...6352	Wo	½ F	I-R...	R.	Tim..	Ros...	S&N..	S-C...
‡Kleiber.....	1½	143	58	S-36x4	S-36x7	Cont..	4-4½x5½	Stro....	Bosc..	M	Opt‡.	Non..	B-L...	M D..	B-L...	N	Tim...6460	Wo	½ F	I-R...	R.	Tim..	Ros...	S&N..	S-C...
Kleiber.....	2½	160	58½	S-36x5	S-36x10	Cont..	4-4½x5½	Stro....	Bosc..	M	Bosc‡.	Non..	B-L...	M D..	B-L...	N	Tim...6560	Wo	½ F	I-R...	R.	Tim..	Ros...	S&N..	S-C...
Kleiber.....	3½	163	65½	S-36x5	S-36x12	Cont..	4-4½x5½	Stro....	Bosc..	M	Bosc‡.	Non..	B-L...	M D..	B-L...	N	Tim...6666	Wo	F F.	I-R...	R.	Tim..	Ros...	S&N..	S-C...
Krebs..... J24	1	156	58	P-34x5	P-34x5	Cont..	4-3½x5	Zeni....	Bosc..	M	Bosc‡.	Cen...	B-L...	M D..	B-L...	O.	Tim...6250	Wo	½ F	I-R...	R.	Tim..	Ros...	C&L..	S-C...
Krebs..... K45	1½	160	58	S*-36x4	S*-36x7	Cont..	4-4½x5½	Zeni....	Bosc..	M	Bosc‡.	Cen...	B-L...	M D..	B-L...	O.	Tim...6460	Wo	½ F	I-R...	R.	Tim..	Ros...	C&L..	S-C...
Krebs..... L75	2½	180	58½	S*-36x4	S*-36x4d	Cont..	4-4½x5½	Zeni....	Bosc..	M	Bosc‡.	Cen...	B-L...	M D..	B-L...	O.	Tim...6560	Wo	F F.	I-R...	R.	Tim..	Ros...	C&L..	S-C...
Krebs..... L110	3½	190	67	S*-36x5	S*-40x5d	Cont..	4-4½x5½	Zeni....	Bosc..	M	Bosc‡.	Cen...	B-L...	M D..	B-L...	O.	Tim...6666	Wo	F F.	I-R...	R.	Tim..	Ros...	C&L..	S-C...
Krebs..... B120	3½	200	67	S-36x6	S-40x6d	Cont..	4-4½x6	Zeni....	Bosc..	M	Bosc‡.	Cen...	B-L...	M D..	B-L...	O.	Tim...6666	Wo	F F.	I-R...	R.	Tim..	Ros...	C&L..	S-C...
Lange..... E	2½	153	58½	S*-36x4	S*-36x7	Cont..	4-4½x5½	Stro....	Apol..	M	None..	Cen...	B-L...	M D..	B-L...	O.	Tim...6560	Wo	F F.	I-R...	R.	Tim..	Ros...	C&L..	S-W..
Lange..... F	3½	168	65½	S-36x5	S-36x10	Cont..	4-3½x5	Stro....	Apol..	M	None..	Cen...	B-L...	M D..	B-L...	E.	Tim...6666	Wo	F F.	I-R...	R.	Tim..	Ros...	C&L..	S-W..
‡Larrabee..... X2	1½	138	56	P-34x5	P-34x5	Cont..	6-3⅜x4½	Zeni....	Bosc..	B.	Bosc..	Non..	B-L...	M D..	B-L...	O.	Sal..1480E	S B.	¾ F	E-R...	R.	Sal...	Gem..	W&W.	D-P...
Larrabee..... XJ	2½	168	57	P-36x6	P-36x6	Cont..	6-3⅜x4½	Zeni....	Bosc..	B.	Bosc..	Non..	B-L...	M D..	B-L...	O.	She.W1501	Wo.	½ F	I-R...	R.	She...	Gem..	W&W.	S-C...
Larrabee..... K5	2½	176	60	S*-36x4	S*-36x8	Cont..	4-4½x5½	Zeni....	Bosc..	M	Bosc‡.	Hyd..	B-L...	M D..	B-L...	O.	She.. W22	Wo	½ F	I-R...	R.	She...	Ros...	C&L..	S-C...
Larrabee..... L4	3½	186	70	S*-36x5	S*-36x12	Cont..	4-4½x5½	Zeni....	Bosc..	M	Bosc‡.	Hyd..	B-L...	M D..	B-L...	O.	She.. W32	Wo	½ F	I-R...	R.	She...	Ros...	C&L..	S-C...
Leadingham..... C	1	130	58	S*-34x5	S*-35x5	H-S..	4-3½x5	Zeni....	Spli...	M	Dyne..	Non..	B & B.	S P...	Det...	N	Wis..800G	Wo.	½ F	I-R...	R.	Col...	Lav...	S&N..	S-W..
Leadingham..... W	1½	144	58	S*-34x4	S*-34x6	Wauk.	4-3½x5½	Zeni....	Spli...	M	Dyne‡	Cen...	B & B.	S P...	Det...	O.	Wis..800H	Wo.	½ F	I-R...	R.	Shu...	Lav...	S&N..	S-W..
Leadingham.....	2	145	58	S*-34x4	S*-36x7	Wauk.	4-4½x5½	Zeni....	Spli...	M	None..	Cen...	B & B.	S P...	Det...	O.	Wis..800J	Wo	½ F	I-R...	R.	Shu...	Lav...	S&N..	S-W..
Leadingham.....	3½	160	64	S-36x6	S-36x6d	Wauk.	4-4½x6½	Zeni....	Spli...	M	Dyn‡.	Cen...	B-L...	S P...	B-L...	O.	Wis..900E	Wo	½ F	I-R...	R.	Shu...	Ros...	C&L..	S-W..
Leadingham.....	5	160	70	S-36x6	S-40x6d	Wauk.	4-5 x6½	Zeni....	Spli...	M	Opt‡.	Cen...	B-L...	M D.	B-L...	....	Wis.....	Wo.	Dd.	I-R...	R.	Shu...	Ros...	C&L..	S-D...
Leadingham.....	7	160	70	S-36x6	S-40x7d	Wauk.	4-5 x6½	Zeni....	Spli...	M	Opt‡.	Cen...	B-L...	M D..	B-L...	....	Wis.....	Wo.	Dd.	I-R...	R.	Shu...	Ros...	C&L..	S-D...

For abbreviations see page 427.

American Gasoline Truck Specifications—Continued

MAKE AND MODEL	GENERAL					ENGINE			ELECTRICAL SYSTEM				TRANSMISSION				REAR AXLE			BRAKES		MISCELLANEOUS			
				Tires					Ignition				Clutch		Gearset								Steering Gear	
	Tons Capacity	Wheelbase (Ins.) §	Track. Rear Axle (Ins.)	Type and Size. Front (Ins.)	Type and Size. Rear (Ins.)	Make	Number of Cylinders. Bore and Stroke (Ins.)	Carbureter Make	Make	Current Source	Generator and Starter Make	Governor Type	Make	Type	Make	Power Take-off	Make and Model	Final Drive	Type	Service—Location and Type	Emergency—Location	Front Axle Make	Make	Type	Wheels Type
Maccar	1½	132	....	P-34x5	P-34x5	Wisc.	4-4 x5	Zeni.	Bosc.	M	Bosc.	Non.	B-L.	M D.	B-L.	O.	Sal. 1526E	S B.	¾ F	E-R.	R.	Sal.	Ros.	C&L.	S-C.
Maccar L1	1½	150	59	S*-36x4	S*-36x6	Wisc.	4-4 x6	Stro. Zeni.	Eise.	M	Bosc‡.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6460	Wo.	½ F	I-R.	R.	Tim.	Ros.	S&N.	S-C.
‡‡Maccar H1	3	162	58½	S*-36x4	S*-36x5d	Wisc.	4-4½x6	Stro. Zeni.	Eise.	M	Bosc‡.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-C.
Maccar M2	4	174	85½	S*-36x5	S-36x6d	Wisc.	4-4½x6	Zeni. Stro.	Eise.	M	Bosc‡.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6666	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-C.
Maccar G1	5	186	69½	S-36x6	S-40x6d	Wisc.	4-5 x6	Stro. Zeni.	Eise.	M	Bosc‡.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6760	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-C.
Macdonald A	7½	180	....	S-40x7	S-40x14	Buda.	4-4½x6	Stro.	.....	M	Opt‡.	Cen.	B-L.	M D.	B-L.	..	Own.	Dd.	½ F	E-F.	F.	Own.	Own.	Hyd.	D-C.
‡‡Mack AB	1	146½	62½	S*-36x4	S*-36x34d	Own.	4-4 x5	Zeni.	Spli.	M	L-N‡.	Cen.	Own.	M D.	Own.	E.	Own.	D R	F F.	I-R.	D	Own.	Own.	W&W.	S-C.
‡‡Mack AB	1½	146½	60½	S*-36x4	S*-36x34d	Own.	4-4 x5	Zeni.	Spli.	M	L-N‡.	Cen.	Own.	M D.	Own.	E.	Own.	D R	F F.	I-R.	D	Own.	Own.	W&W.	S-C.
‡‡Mack AE	2	146½	60½	S*-36x4	S*-36x4d	Own.	4-4½x5	Zeni.	Spli.	M	L-N‡.	Cen.	Own.	M D.	Own.	E.	Own.	D R	F F.	I-R.	D	Own.	Own.	W&W.	S-C.
‡‡Mack AB	2	146½	62½	S*-36x4	S*-36x4d	Own.	4-4½x5	Zeni.	Spli.	M	L-N‡.	Cen.	Own.	M D.	Own.	E.	Own.	Ch.	½ F	E-D.	R.	Own.	Own.	W&W.	S-C.
‡‡Mack AB	2½	146½	62½	S*-36x4	S*-36x4d	Own.	4-4½x5	Zeni.	Spli.	M	L-N‡.	Cen.	Own.	M D.	Own.	E.	Own.	Ch.	½ F	E-D.	R.	Own.	Own.	W&W.	S-C.
‡‡Mack AB	2½	146½	60½	S*-36x4	S*-36x4d	Own.	4-4½x5	Zeni.	Spli.	M	L-N‡.	Cen.	Own.	M D.	Own.	E.	Own.	D R	F F.	I-R.	D	Own.	Own.	W&W.	S-C.
‡‡Mack AC	3½	156	71½	S*-36x5	S-40x5d	Own.	4-5 x6	Zeni.	Spli.	M	L-N‡.	Cen.	Own.	S P.	Own.	E.	Own.	Ch.	½ F	E-J.	R.	Own.	Own	W&W.	S-C.
Mack AC	5	156	74½	S*-36x6	S-40x6d	Own.	4-5 x6	Zeni.	Spli.	M	L-N‡.	Cen.	Own.	S P.	Own.	E.	Own.	Ch.	½ F	E-J.	R.	Own.	Own.	W&W.	S-C.
††Mack‡‡ AB	5	122½	62½	S*-36x4	S*-36x4d	Own.	4-4½x5	Zeni.	Spli.	M	L-N‡.	Cen.	Own.	M D.	Own.	E.	Own.	Ch.	½ F	E-D.	R.	Own	Own.	W&W.	S-C.
Mack AC	6½	156	74½	S*-36x6	S-40x12d	Own.	4-5x 6	Zeni.	Spli.	M	L-N‡.	Cen.	Own.	S P.	Own.	E.	Own.	Ch.	½ F	E-J.	R.	Own.	Own	W&W.	S-C.
††Mack AC	7	128	71½	S*-36x5	S*-40x5d	Own.	4-5 x6	Zeni.	Spli.	M	L-N‡.	Cen.	Own.	S P.	Own.	E.	Own.	Ch.	½ F	E-J.	R.	Own.	Own.	W&W.	S-C.
Mack AC	7½	156	76½	S*-36x7	S-40x7d	Own.	4-5 x6	Zeni.	Spli.	M	L-N‡.	Cen.	Own.	S P.	Own.	E.	Own.	Ch.	½ F	E-J.	R.	Own.	Own.	W&W.	S-C.
††Mack AC	10	128	74½	S*-36x6	S-40x6d	Own.	4-5 x6	Zeni.	Spli.	M	L-N‡.	Cen.	Own.	S P.	Own.	E.	Own.	Ch.	½ F	E-J.	R.	Own.	Own.	W&W.	S-C.
††Mack AC	13	128	74½	S*-36x6	S-40x12	Own.	4-5 x6	Zeni.	Spli.	M	L-N‡.	Cen.	Own.	S P.	Own.	E.	Own.	Ch.	½ F	E-J.	R.	Own.	Own.	W&W.	S-C.
††Mack AC	15	128	76½	S*-36x7	S-40x7d	Own.	4-5 x6	Zeni.	Spli.	M	L-N‡.	Cen.	Own.	S P.	Own.	E.	Own.	Ch.	½ F	E-J.	R.	Own.	Own.	W&W.	S-C.
§§Mason Road King	1	131	56	P-31x5	P-31x5	Here.	4-4 x5	John.	A-L.	B	A-L.	Non.	Hoo.	M D.	War.	..	Fli. Special	S B.	F F.	E-R.	R.	Fli.	Lav.	S&N.	S-W.
Master 11	1½	132	....	S-33x5	S-33x5	Buda.	4-3½x5½	Zeni.	West.	B.	West.	Non.	Ful.	M D.	Ful.	..	Tim. 5511	S B.	½ F	I-R.	R.	Tim.	Ros	.....	S-W.
Master 21	1½	142	....	S-34x4	S-34x6	Buda.	4-4x5½	Zeni.	Eise.	M	None.	Cen.	Ful.	M D.	Ful.	..	Tim.	Wo.	½ F	I-R.	R.	She.	Ros.	.....	S-W.
Master 41	2½	154	....	S-34x4	S-36x8	Buda.	4-4½x5½	Zeni.	Eise.	M	None.	Cen.	Ful.	M D.	Ful.	..	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Ros.	.....	S-W.
Master 51	3½	158	....	S-36x5	S-40x10	Buda.	4-4½x6	Zeni.	Eise.	M	None.	Cen.	Ful.	M D.	Ful.	..	Tim. 6666	Wo.	F F.	I-R.	R.	Tim.	Ros.	.....	S-W.
Master 61	5	158	....	S-36x5	S-40x12	Buda.	4-4½x6	Zeni.	Eise.	M	None.	Cen.	Ful.	M D.	Ful.	..	Tim. 6760	Wo.	F F.	I-R.	R.	Tim.	Ros.	.....	S-W.
‡‡Maxwell 50	1½	124	56	P-35x5	P-35x5	Own.	4-3½x4½	Stew.	Remy.	B.	Remy.	Non.	Mec.	S P.	Own.	N	Own.	Wo.	½ F	E-R.	R.	Own.	Own.	W&W	S-W.
‡‡Menominee H	1	132	56	P-35x5	P-35x5	Wisc.	4-4 x5	Zeni.	Bosc.	M	Bosc.	Sue.	B & B.	S P.	Det.	O.	Col. 52000	S B	F F.	E-R.	R.	Col.	Lav.	S&N.	S-W.
Menominee HT	1½	130	57½	S*-34x3½	S*-36x5	Wisc.	4-3½x5	Stro.	Eise.	M	†Eis‡.	Sue.	Del.	M D.	Cot.	O.	Wis. 800G	Wo.	½ F	I-R.	R	Shu.	Ros.	S&N.	S-W.
Menominee H	1½	144	57½	S*-36x3½	S*-36x5	Wisc.	4-4 x5	Stro.	Eise.	M	†Eis‡.	Sue.	Del.	M D.	Cot.	O.	Wis. 800H	Wo.	½ F	I-R.	R.	Shu.	Ros.	S&N.	S-W.
Menominee D	2½	144	57½	S*-36x4	S*-36x8	Wisc.	4-4 x6	Stro.	Eise.	M	Bosc‡.	Sue.	Del.	M D.	Cot.	O.	Wis. 8001	Wo.	½ F	I-R.	R.	Con.	Ros.	S&N.	S-W.
Menominee G	3½	160	64	S*-36x5	S*-36x10	Wisc.	4-4½x6	Stro.	Eise.	M	Bosc‡.	Sue.	Del.	M D.	Cot.	O.	Tim. 6666	Wo.	F F.	I-R.	R.	Con.	Ros.	S&N.	S-C.
Menominee J3	5	160	69½	S*-36x6	S*-36x12	Wisc.	4-4½x6	Stro.	Eise.	M	Bosc‡.	Sue.	Del.	M D.	Cot.	O.	Tim. 6760	Wo.	F F.	I-R.	R.	Con.	Ros.	S&N.	S-C.
Moreland RR	1	132	56	P-34x5	P-34x5	Here.	4-4 x5	Zeni.	Spli.	M	A-L.	Cen.	B-L.	M D.	B-L.	O.	Tim. 5512	Wo.	½ F	E-R.	R	Tim.	Ros.	C&L.	S-C.
Moreland BX	1½	132	58	S*-36x3½	S*-36x7	Here.	4-4 x5	Zeni.	Spli.	M	A-L.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6460	Wo.	½ F	I-R.	R	Tim.	Ros.	C&L.	S-C.
Moreland EX	2	Opt.	58	S*-36x4	S*-36x8	Cont.	4-4½x5½	Stro.	Spli.	M	A-L‡.	Cen.	Own.	M D.	Own.	O.	Tim. 6460	Wo.	½ F	I-R.	R.	Tim.	Ros.	C&L.	S-C.
Moreland AX	3	Opt.	58½	S*-36x5	S*-36x10	Cont.	4-4½x5½	Stro.	Spli.	M	A-L‡.	Cen.	Own.	M D.	Own.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Ros.	C&L.	S-C.
Moreland RX	5	Opt.	65½	S-36x6	S-40x14	Cont.	4-4½x6	Stro.	Spli.	M	A-L‡.	Cen.	Own.	M D.	Own.	O.	Tim. 6666	Wo.	F F.	I-R.	R.	Tim.	Ros.	C&L.	S-C.
‡‡Nash 2018	1	130	56	S*-34x4	S*-34x5	Own.	4-3½x5½	Stro.	Eise.	M	A-L.	Cen.	B & B.	S P.	Det.	N	Cla. 10	I-G.	Dd.	I-R.	D	Own.	Lav.	S&N.	S-W.
Nash Quad	2	124	60½	S*-36x6	S*-36x6	Buda.	4-4½x5½	Stro.	Eise.	M	None.	Cen.	B & B.	S P.	Own.	O.	Own.	I-G.	Dd.	I-R.	D	Own.	Lav.	Spe.	D-C.
‡‡Nash 3018	2	144	59½	S*-34x4	S*-34x7	Own.	4-3½x5½	Stro.	Eise.	M	A-L.	Cen.	B & B.	S P.	Det.	O.	Cla. 2D	I-G.	Dd.	E-R.	D	Own.	Lav.	Spe.	S-W.
Nash 5018	2½	121	59½	S*-34x4	S*-34x7	Own.	4-3½x5½	Stro.	Eise.	M	A-L.	Cen.	B & B.	S P.	Det.	O.	Cla. 2D	I-G.	Dd.	E-R.	D	Own.	Lav.	Spe.	S-W.
Nelson & Le Moon G	1	140	56	C-31x4	P-31x5	Cont.	4-3½x5	Stro.	Bosc.	M	Bosc.	Non.	Ful.	M D.	Ful.	N	Tim. 6250	Wo.	½ F	I-R.	R.	Tim.	Ros.	C&L.	S-W.
Nelson & Le Moon G	2	Opt.	58	S-36x4	S-36x6	Cont.	4-4½x5½	Stro.	Bosc.	M	Bosc‡.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6460	Wo.	¾ F	I-R.	R.	Tim.	Ros.	S&N.	S-W.
Nelson & Le Moon G	2½	Opt.	58	S-36x4	S-36x7	Cont.	4-4½x5½	Stro.	Bosc.	M	Bosc‡.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-W.
Nelson & Le Moon G4	3½	Opt.	75	S-36x5	S-36x5d	Cont.	4-4½x5½	Stro.	Bosc.	M	Bosc‡.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6660	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-W.
Nelson & Le Moon G	5	Opt.	75	S-36x6	S-40x6d	Cont.	4-4½x6	Stro.	Bosc.	M	Bosc‡.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6760	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-W.
§§Netco DK	2	170	58½	S*-36x4	S*-36x7	Cont.	4-4½x5½	Zeni.	Eise.	M	West‡.	Hyd.	B-L.	M D.	B-L.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-W.
§§Netco HL	2½	170	58½	S*-36x4	S*-36x8	Cont.	4-4½x5½	Zeni.	Eise.	M	West‡.	Hyd.	B-L.	M D.	B-L.	O.	Tim. 6560	Wo.	F F.	I-R.	R	Tim.	Gem.	W&W.	S-W.
‡‡Noble A75	1	130	56	P-34x4½	P-34x4½	Buda.	4-3½x5½	Zeni.	Eise.	M	Bosc.	Cen.	Ful.	M D.	Ful.	O.	Cla. B300	S B.	½ F	E-R.	R.	She.	Ros.	C&L.	S-W.
‡‡Noble A21	1½	144	56	P-34x5	P-34x5	Buda.	4-3½x5½	Zeni.	Eise.	M	Bosc.	Cen.	Ful.	M D.	Ful.	O.	She. W1501	Wo.	½ F	I-R.	R.	She.	Ros.	C&L.	S-W.
Noble B31	2	156	59	S*-36x4	S*-36x7	Buda.	4-3½x5½	Stro.	Eise.	M	Bosc‡.	Cen.	Ful.	M D.	Ful.	O.	She. W103	Wo.	½ F	I-R.	R.	She.	Lav.	S&N.	S-W.
Noble D51	2½	162	58	S*-36x4	S*-36x8	Buda.	4-4½x5½	Stro.	Eise.	M	Bosc‡.	Cen.	Ful.	M D.	Ful.	O.	She. W21	Wo.	½ F	I-R.	R.	She.	Lav.	S&N.	S-W.
Noble E71	3½	164	66	S*-36x5	S*-36x10	Buda.	4-4½x6	Stro.	Eise.	M	Bosc‡. Wet‡.	Cen.	Ful.	M D.	War.	O.	She. W30	Wo.	½ F	I-R.	R.	She.	Lav.	S&N.	S-W.
§§Ogden A2	1	125	56	P-34x5	P-34x5	Cont.	4-3½x5	Stro.	Spli.	M	Rem‡.	Non.	B-L.	M D.	B-L.	O.	Tim. 6250	Wo.	½ F	I-R.	R.	Tim.	Ros.	S&N.	S-W.
§§Ogden D	1½	132	56	S-36x4	S-36x6	Cont.	4-3½x5	Stro.	Spli.	M	Rem‡.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6460	Wo.	½ F	I-R.	R.	Tim.	Ros.	S&N.	S-W.
§§Ogden E	2½	153	58½	S-36x5	S-36x7	Cont.	4-4½x5½	Stro.	Spli.	M	†Ves‡.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-W.
Old Reliable B	2½	140	58	S-36x4	S-36x8d	Wisc.	4-4½x6	Stro.	Apol.	M	†Bosc.	Hyd.	Ful.	M D.	Ful.	O.	She. 21	Wo.	¾ F	I-R.	R.	She.	Ros.	W&W	S-W.
Old Reliable C	3½	140	70½	S-36x5	S*-36x12	Wauk.	4-4½x6½	Stro.	Apol.	M	†Bosc.	Hyd.	Ful.	M D.	Ful.	O.	She. 32W	Wo.	¾ F	I-R.	R.	She.	Ros.	C&L.	S-W.
Old Reliable KLM	7½	124	66½	S-36x6	S-40x14d	Wauk.	4-4½x6½	Stro.	Bosc.	M	None.	Cen.	Own.	M O.	Own.	E.	Own.	Ch.	¾ F	E-D.	R.	Con.	Ros.	S&N.	S-W.
‡‡Oldsmobile T	1	128	56	P-33x5	P-33x5	Own	4-3½x5½	Zeni.	Remy.	B.	A-L.	Non.	B & B.	S P.	Mun.	O.	Tor. OX2L	I G.	....	E-R.	R.	Tor.	Jac.	S&N.	S-W.
Olympic A	2½	Opt.	58½	S-36x4	S-36x10	Buda.	4-4½x5½	Zeni.	Eise.	M	Opt‡.	Non.	B-L.	M D.	B-L.	E.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-C.
Oneida B9	1½	144	57½	S*-36x3½	S*-36x7	Hink.	4-4 x5½	Stro.	Bosc.	M	†Bos‡.	Cen.	Ful.	M D.	Ful.	E.	Wis. 800J	Wo.	½ F	I-R.	R.	Shu.	Ros.	W&W.	S-W.
Oneida C9	2½	160	60	S*-36x4	S*-36x8	Hink.	4-4 x5½	Stro.	Bosc.	M	†Bos‡.	Cen.	Ful.	M D.	Ful.	E.	Wis. 900C	Wo.	½ F	I-R.	R.	Shu.	Ros.	W&W.	S-W.
Oneida D9	3½	170	67	S*-36x5	S*-36x10	Hink.	4-4½x5½	Stro.	Bosc.	M	†Bos‡.	Cen.	Ful.	M D.	Ful.	E.	Tim. 6660	Wo.	F F.	I-R.	R.	Con.	Ros.	W&W.	S-W.
Overland	½	100	56	P-30x3½	P-30x3½	Own.	4-3½x4	Till.	Conn.	B.	A-L.	Non.	B & B.	S P.	Own.	N	Own.	S B.	½ F	E-R.	R.	Own.	Own.	Pla.	S-W.
Parker B23	1	131	56	P-33x5	P-33x5	Buda.	4-3½x5½	Zeni.	West.	B.	West.	Cen.	Ful.	M D.	Ful.	O.	Fli. 72BA	S B	F F.	E-R.	R.	Fli.	Lav.	S&N.	S-W.
Parker E24	1½	140	56	S-34x3½	S-34x6	Wisc.	4-4 x5	Stro.	West.	B.	West.	Cen.	Ful.	M D.	Ful.	O.	Wis. 800HA	Wo.	½ F	E-R.	R.	Con.	Lav.	S&N.	S-W.
Parker G24	2½	150	58	S-36x4	S-36x8	Wisc.	4-4½x6	Stro.	Eise.	M	West.	Cen.	B-L.	M D.	Ful.	O.	Own.	Wo.	F F.	E-D.	R.	Shu.	Ros.	S&N.	S-C.
Parker J24	3½	160	58	S-36x5	S-40x10	Wisc.	4-4½x6	Stro.	Eise.	M	West.	Cen.	B-L.	M D.	Ful.	O.	Own.	Wo.	F F.	E-D.	R.	Shu.	Ros.	S&N.	S-C.
‡‡Patriot 7R	1	129	56	P-35x5	P-35x5	Cont.	4-3½x5	Stro.	Bosc.	B.	Bosc. Biju.	Non.	B & B.	S P.	Cov.	O.	Tim. 6250	Wo.	½ F	I-R.	R.	Fli.	CAS.	W&W.	S-W.
‡‡Patriot 9I	2	146	58	S*-34x4	S*-34x7	Hink.	4-4 x5½	Stro.	Eise.	M	Biju.	Cen.	Cov.	M D.	Ful.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Shu.	Ros.	S&N.	S-W.
Patriot 8W	3	156	60½	S*-36x5	S*-36x8	Hink.	4-4½x5½	Stro.	Eise.	M	Biju.	Cen.	Cov.	M D.	Cov.	O.	Wis. 900B	Wo	½ F	I-R.	R.	Shu.	Ros.	S&N.	S-W.
Pierce-Arrow X4	2	162	61	S*-36x4	S*-36x5d	Own.	4-4 x5½	Stro.	Dele.	B.	Delc.	Cen.	Cov.	M D.	Cov.	O.	Eat.	Wo	¾ F	I-R.	R.	Eat.	Ros.	S&N.	S-P.
Pierce-Arrow XB	3	180	61	S*-36x4	S*-36x5d	Own.	4-4 x5½	Stro.	Dele.	B.	Delc.	Cen.	Cov.	M D.	Cov.	O.	Eat.	Wo	¾ F	I-R.	R.	Eat.	Ros.	S&N.	S-P.
Pierce-Arrow WC	4	180	66½	S*-36x5	S*-36x6d	Own.	4-4½x6½	Stro.	Dele.	B.	Delc.	Cen.	Cov.	M D.	Own.	O.	Own.	Wo	F F.	E-D.	R.	Own.	Own	S&N.	S-P.
Pierce-Arrow WD	5	198	66½	S-36x6	S-36x7	Own.	4-4½x6½	Stro.	Dele.	B.	Delc.	Cen.	Cov.	M D.	Own.	O.	Own.	Wo	F F.	E-D.	R.	Own.	Own.	S&N.	S-P.
Pierce-Arrow RF	6	204	68½	S-36x6	S-40x7d	Own.	4-4½x6½	Stro.	Dele.	B.	Delc.	Cen.	Cov.	M D.	Own.	O.	Own.	Wo	F F.	E-D.	R.	Own.	Own.	S&N.	S-P.
Pierce-Arrow RF	7½	204	68½	S-36x6	S-40x8d	Own.	4-4½x6½	Stro.	Dele.	B.	Delc.	Cen.	Cov.	M D.	Own.	O.	Own.	Wo	½ F	E-D.	R.	Own.	Own.	S&N.	S-P.
Rainier R31	¾	125	56	P-35x5	P-35x5	Cont.	4-3½x5	Zeni.	Eise.	M	Bos‡. Dyn‡.	Suc.	B-L.	M D.	B-L.	O.	Tim. 6250	Wo.	½ F	I-R.	R.	Tim.	Lav.	S&N.	S-W.
Rainier R29	1	133	56	S*-34x3½	S*-34x4	Cont.	4-3½x5	Zeni.	Eise.	M	Bos‡. Dyn‡.	Suc.	B-L.	M D.	B-L.	O.	Tim. 6250	Wo.	½ F	I-R.	R.	Tim.	Lav.	S&N.	S-W.
Rainier R36	1½	147	58	S*-34x3½	S*-34x5	Cont.	4-4½x5½	Zeni.	Eise.	M	Dele‡.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6460	Wo.	½ F	I-R.	R.	Tim.	Ros.	C&L.	S-W.
Rainier R28	2	157	59½	S*-34x4	S*-34x7	Cont.	4-4½x5½	Zeni.	Eise.	M	Dele‡.	Cen.	B-L.	M D.	B-L.	O.	She. W103	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-W.
Rainier R20	2½	165	58½	S*-36x4	S*-36x8	Cont.	4-4½x5½	Zeni.	Eise.	M	Dele‡.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-W.
Rainier R25	3½	170	65½	S-36x5	S-36x5d	Cont.	4-4½x5½	Zeni.	Eise.	M	Dele‡.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6666	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-C.
Rainier R27	6	170	69½	S-36x6..	S-40x6d	Cont.	4-4½x6	Zeni.	Eise.	M	Dele‡.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6760	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-C.
Red Ball A	3	174	61½	P-35x6	P-36x6	Wauk.	4-4½x5½	Sche.	Bosc.	M	Bosc.	Cen.	M&E.	M D.	Cov.	O.	Wis. 900CA	Wo	½ F	I-R.	R.	Con.	Ros.	C&L.	S-W.
‡‡Reo F	1½	128	56	P-33x5	P-33x5	Own.	4-4½x4½	John.	N-E.	B.	N-E.	Non.	Own.	M D.	Own.	O.	Own.	S B.	½ F	E-R.	R.	Own.	Own.	BPS.	S-W.
Republic 75	1½	122	56	P-33x5	P-33x5	Lyco.	4-3½x5	Stro.	Bosc.	B	Bosc.	Non.	Ful.	M D.	Ful.	N	Tor. 750	I G.	Dd.	E-R.	R.	Tor.	Jac.	S&N.	S-W.
Republic 11X	2	144	57½	S*-34x3½	S*-34x5	Cont.	4-3½x5	Stro.	Bosc.	M	Bosc‡.	Cen.	Ful.	M D.	Ful.	O.	Tor. CT2	I G.	Dd.	E-D.	R.	Tor.	Jac.	S&N.	S-W.

For abbreviations see page 427.

American Gasoline Truck Specifications—Continued

MAKE AND MODEL	GENERAL					ENGINE			ELECTRICAL SYSTEM				TRANSMISSION				REAR AXLE			BRAKES		MISCELLANEOUS			
				Tires					Ignition				Clutch		Gearset								Steering Gear		
	Tons Capacity	Wheelbase (Ins.) §	Track, Rear Axle (Ins.)	Type and Size, Front (Ins.)	Type and Size, Rear (Ins.)	Make	Number of Cylinders, Bore and Stroke (Ins.)	Carbureter Make	Make	Current Source	Generator and Starter Make	Governor Type	Make	Type	Make	Power Take-off	Make and Model	Final Drive	Type	Service—Location and Type	Emergency—Location	Front Axle Make	Make	Type	Wheels Type
Republic	19	3	154	57½	C*-36x4	C*-36x8	Cont.	4-4½x5½	Stro.	Bosc.	M	Bosc‡.	Cen.	Ful.	M D.	Ful.	O.	Tor. CT2	I G.	Dd.	E-D.	R.	Tor.	Jac.	S&N.	S-W.
Republic	20	4½	165	67½	C*-36x5	C*-36x10	Cont.	4-4½x5½	Stro.	Bosc.	M	Bosc‡.	Cen.	Ful.	M D.	Ful.	O.	Tor. E	I G.	Dd.	E-D.	R.	Sav.	Jac.	S&N.	S-C.
‡‡Rowe	CW	1½	133	56	P-36x6	P-36x6	Wisc.	4-3½x5	Zeni.	Bosc.	M	Opt‡.	Cen.	B-L.	M D.	B-L.	N	She. W1501	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-W.
‡‡Rowe	CDW	2	140	59½	C-34x5	S-36x34d	Wisc.	4-4 x5	Zeni.	Bosc.	M	Opt‡.	Cen.	B-L.	M D.	B-L.	E.	She. W103	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-W.
‡‡Rowe	CDW	2½	142	58	C-34x5	S-36x4d	Wisc.	4-4½x5	Zeni.	Bosc.	M	Opt‡.	Cen.	B-L.	M D.	B-L.	O.	She. W21	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-W.
‡‡Rowe	GSW	3	158	58	C-34x6	C-36x5d	Wisc.	4-4 x6	Zeni.	Bosc.	M	Opt‡.	Cen.	B-L.	M D.	B-L.	O.	She. W21	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-W.
‡‡Rowe	HW	4	158	69½	C-36x7	S-36x6d	Wisc.	4-4½x6	Zeni.	Bosc.	M	Opt‡.	Cen.	B-L.	M D.	B-L.	O.	She. W31	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-W.
‡‡Rowe	FW	5	170	73½	C-36x7	S-40x6d	Wisc.	4-4½x6	Zeni.	Bosc.	M	Opt‡.	Cen.	B-L.	M D.	B-L.	..	She. W51	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-C.
‡‡Ruggles	15	⅜	122	56	P-32x4½	P-32x4½	H-S.	4-3½x5	Zeni.	Bosc.	B.	Bosc.	Non.	M&E.	S P.	Ful.	N	Col. 3000	S B.	¾ F	E-R.	R.	Col.	Jac.	S&N.	S-W.
‡‡Ruggles	20R	1½	128	56	P-31x5	P-31x5	Herc.	4-4 x5	Zeni.	Remy.	B.	Remy	Non.	B-L.	M D.	B-L.	O.	Col. 52000	S B.	¾ F	E-R.	R.	Col.	Jac.	S&N.	S-W.
‡‡Ruggles	40	2½	148	58	P-31x5	S-31x7	Herc.	4-4 x5	Zeni.	Bosc.	M	Rem‡.	Non.	B-L.	M D.	B-L.	O.	Wis. 65	D R	½ F	I-R.	R.	Col.	Jac.	S&N.	S-W.
‡‡Ruggles	40H	3	148	60	S*-36x4	S*-36x8	Herc.	4-4 x5	Zeni.	Bosc.	M	Rem‡.	Non.	B-L.	M D.	B-L.	O	Wis. 88E	D R	½ E	I-R.	R.	Col.	Jac.	S&N.	S-W.
‡‡Rumley	A	1½	144	57	S*-36x3½	S*-36x5	Buda.	4-3½x5½	Stro.	Spli.	M	Bosc‡.	Cen.	Ful.	M D.	Ful.	O.	She. 1501W	Wo.	½ E	I-R.	R.	Shu.	Gem.	S&N.	S-W.
‡‡Sanford	15	1½	132	56	S*-36x3½	S*-36x5	Cont.	4-3½x5	Zeni.	Eise.	M	Dyn‡.	Non.	B-L.	M D.	B-L.	O.	She. W1501	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-W.
‡‡Sanford	25	2½	174	60	S-36x4	S-36x4d	Cont.	4-4½x5½	Stro.	Eise.	M	None.	Cen.	B & B.	S P.	B-L.	O.	She. W21	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-W.
‡‡Sanford	W35	3½	174	69½	S-36x5	S-36x5d	Cont.	4-4½x5½	Stro.	Eise.	M	None.	Cen.	B & B.	S P.	B-L.	O.	She. W31	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-W.
‡‡Schacht	H	1½	144	57½	S*-36x3½	S*-36x7	Wisc.	4-4 x5	Zeni.	Bosc.	M	None.	Non.	Ful.	M D.	Ful.	O.	Wis. 60D	D R	½ F	I-R.	R.	Shu.	Ros.	C&L.	S-W.
‡‡Schacht	G	2	156	58	S*-36x4	S*-36x7	Wisc.	4-4½x6	Zeni.	Bosc.	M	None.	Cen.	B & B	S P.	Own.	O.	Own.	Wo.	F F.	E-D.	R.	Own.	Own.	W&W.	S-W.
‡‡Schacht	G	2½	156	59	S*-36x4	S*-36x8	Wisc.	4-4½x6	Zeni.	Bosc.	M	None.	Cen.	B & B.	S P.	Own.	O.	Own.	Wo.	F F.	E-D.	R.	Own.	Own.	W&W.	S-W.
‡‡Schacht	G	3	156	60	S*-36x5	S*-36x10	Wisc.	4-4½x6	Zeni.	Bosc.	M	None	Cen.	B & B.	S P.	Own.	O.	Own.	Wo.	F F.	E-D.	R.	Own.	Own.	W&W.	S-W.
Schacht	G	4	168	63	S-36x5	S-40x12	Wisc.	4-4½x6	Zeni.	Bosc.	M	None.	Cen.	B & B.	S P.	Own.	O.	Own.	Wo.	F F.	E-D.	R.	Own.	Own.	W&W.	S-W.
Schacht	G	5	168	63	S-36x5	S-40x7d	Wisc.	4-4½x6	Zeni.	Bosc.	M	None.	Cen.	B & B.	S P.	Own.	O.	Own.	Wo.	F F.	E-D.	R.	Own.	Own.	W&W.	S-W.
Selden	30C	1½	137½	58	S*-31x3½	S*-31x5	Cont.	4-3½x5	Stro.	Eise.	M	N-E‡.	Hyd.	B-L.	M D.	B-L.	O.	Tim. 6460	Wo.	½ F	I-R.	R.	Tim.	Gem.	W&W.	S-W.
Selden	33	1½	146	58	S*-31x4	S*-31x6	Cont.	4-4½x5½	Stro.	Eise.	M	N-E‡.	Cen.	B-L.	M D.	B-L.	O.	Tim.	Wo.	½ F	I-R.	R.	Tim.	Ros.	S&N.	S-C.
Selden	53	2½	151	58½	S*-35x4	S*-35x8	Cont.	4-4½x5½	Stro.	Bosc.	M	N-E‡.	Cen.	B-L.	M D.	B-L.	O.	Tim.	Wo.	F F.	I-R.	R.	Tim.	Gem.	W&W.	S-C.
Selden	50	2½	149	58½	S*-36x4	S*-35x7	Cont.	4-4½x5½	Stro.	Bosc.	M	N-E‡.	Cen.	B-L.	M D.	B-L.	O.	Tim.	Wo.	F F.	I-R.	R.	Tim.	Gem.	W&W.	S-C.
Selden	70	3½	164	68	S*-36x5	S*-35x10	Cont.	4-4½x5½	Stro.	Bosc.	M	N-E‡	Cen.	B-L.	M D.	B-L.	O.	Tim.	Wo.	F F.	I-R.	R.	Tim.	Gem.	W&W.	S-C.
Selden	73	3½	168	68	S*-36x5	S*-36x10	Cont.	4-4¾x6	Stro.	Bosc. Eise.	M	‡N-E.	Cen.	B-L.	M D.	B-L.	O.	Tim.	Wo.	F F.	I-R.	R.	Tim.	Gem.	W&W.	S-C.
Selden	90	5	166	69½	S-36x6	S-40x12	Cont.	4-4¾x6	Stro.	Bosc. Eise.	M	‡N-E.	Cen.	Del.	M D.	B-L.	O.	Tim.	Wo.	F F.	I-R.	R.	Tim.	Gem.	W&W.	S-C.
‡‡Service	25	1½	132	57	P-31x5	P-31x5	Buda.	4-3½x5½	Zeni.	Remy.	B.	Remy.	Non.	B-L.	S P.	B-L.	N	Eat. 1000	S B.	½ F	I-R.	R.	Shu.	Ros.	C&L.	S-W.
Service	33	1	146½	56	S*-31x3½	S*-31x6	Buda.	4-4 x5½	Stro.	Eise.	M	‡Rem.	Non.	B & B.	S P.	B-L.	O.	Tim. 6352	Wo.	½ F	I-R.	R.	Shu.	Ros.	C&L.	S-C.
‡‡Service	42	2	154	58	S*-36x4	S*-36x7	Buda.	4-4½x5½	Stro.	Eise.	M	‡Rem.	Non.	B & B.	S P.	B-L.	O.	Tim. 6460	Wo.	½ F	I-R.	R.	Tim.	Ros.	S&N.	S-C.
‡‡Service	61	3	164½	58½	S*-36x4	S*-36x8	Buda.	4-4½x5½	Stro.	Eise.	M	‡Rem.	Non.	B & B.	S P.	B-L.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-C.
Service	81	4	173½	65½	S*-36x5	S*-36x10	Buda.	4-4½x6	Stro.	Eise.	M	‡Rem.	Non.	B & B.	S P.	B-L.	O.	Tim. 6666	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-C.
Service	103	6	173½	69½	S*-36x6	S*-40x12	Buda.	4-4¼x6	Stro.	Eise.	M	‡Rem.	Non	B & B.	S P.	B-L.	O.	Tim. 6760	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-C.
‡‡Signal	NF	1½	132	56	P-31x5	P-30x6	Cont.	4-3½x5	Stro.	Eise.	M	‡Delc.	Cen.	B-L.	M D.	B-L.	N	Tim. 6352	Wo.	½ F	I-R.	R.	Tim.	Ros.	W&W.	S-W.
‡‡Signal	H	2½	146	58	S-31x4	S-36x6	Cont.	4-4½x5½	Stro.	Eise.	M	‡Delc.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6460	Wo.	½ F	I-R.	R.	Tim.	Ros.	W&W.	S-W.
‡‡Signal	J	3½	150	58½	S-31x4	S-36x8	Cont.	4-4½x5½	Stro.	Eise.	M	‡Delc.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Ros.	W&W.	S-W.
‡‡Signal	M	5	168	65½	S-36x5	S-40x10	Cont.	4-4½x5½	Stro.	Eise.	M	‡Delc.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6660	Wo.	F F.	I-R.	R.	Tim.	Ros.	W&W.	S-W.
‡‡Signal	R	7½	180	69½	S-36x6	S-40x12	Cont.	4-4¼x6	Stro.	Eise.	M	‡Delc.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6760	Wo.	F F.	I-R.	R.	Tim.	Ros.	W&W.	S-C.
Standard	K	1½	144	56	C*-34x3½	C*-36x4	Cont.	4-3½x5	Stro.	Eise.	M	Eis‡. Bos‡.	Non.	B-L.	M D.	B-L.	O.	Tim. 6352	Wo.	½ F	I-R.	R.	Tim.	Ros.	S&N.	S-W.
‡‡Standard	75	1½	134	56	P-33x5	P-33x5	Cont.	4-3½x5	Stro.	Eise.	M	Eis‡. Bos‡.	Non.	B-L.	M D.	B-L.	O.	Tim. 6250	Wo.	½ F	I-R.	R.	Tim.	Ros.	S&N.	S-P.
‡‡Standard	K	3½	147	58½	S*-36x4	S*-36x8	Cont.	4-4½x5½	Stro.	Eise.	M	‡Bosc.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Gem.	W&W.	S-C.
Standard	K	5	160	65½	S-36x5	S-36x12	Cont.	4-4½x5½	Stro.	Eise.	M	‡Bosc.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6666	Wo.	F F.	I-R.	R.	Tim.	Gem.	W&W.	S-C.
Standard	K	7	164	69½	S-36x6	S-40x14	Cont.	4-4¼x6	Stro.	Eise.	M	‡Bosc.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6760	Wo.	F F.	I-R.	R.	Tim.	Gem.	W&W.	S-C.
Star	23	⅜	102	56	P-30x3½	P-30x3½	Cont.	4-3¼x4¼	Till.	A-L.	B.	A-L.	Non.	Own.	S P.	War.	N	Tim. Spec.	S B.	½	I-R.	R.	Tim.			S-W.
Sterling		2½	156	58½	S*-36x4	S*-36x4	Wauk.	4-4¼x5½	Zeni.	Eise.	B.	‡Bosc.	Cen.	B-L.	M D.	B-L.	O.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-W.
Sterling		3½	162	65½	S*-36x5	S*-40x5d	Wauk.	4-4¼x6½	Zeni.	Eise.	B.	‡Bosc.	Cen.	He S.	M O.	Own.	O.	Tim. 6666	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-W.
Sterling	EHD	5	174	76½	S-36x6	S-40x6d	Wauk.	4-5 x6½	Zeni.	Eise.	B.	‡Bosc.	Cen.	He S.	M O.	Own.	O.	Own.	Ch.	Dd.	I-R.	D	Tim.	Ros.	S&N.	S-C.
Sterling		5	168	69½	S*-36x6	S*-40x6d	Wauk.	4-5 x6½	Zeni.	Eise.	B.	‡Bosc.	Cen.	He S.	M O.	Own.	O.	Tim. 6760	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-W.
Sterling	ELD	5	174	75½	S-36x5	S-40x10	Wauk.	4-4¼x6½	Zeni.	Eise.	M	‡Bosc.	Cen.	He S.	M O.	Own.	O.	Own.	Ch.	Dd.	I-R.	D	Tim.	Ros.	S&N.	S-W.
Sterling	EHD	7½	174	78½	S-36x6	S-40x7d	Wauk.	4-5 x6½	Zeni.	Eise.	B.	‡Bosc.	Cen.	He S.	M O.	Own.	O.	Own.	Ch.	Dd.	I-R.	D	Tim.	Ros.	S&N.	S-C.
‡‡Stewart	15	1	130	56	P-35x5	P-35x5	Buda.	4-3½x5½	Zeni.	Remy.	M	‡Rem.	Cen.	Ful.	M D.	Ful.	N	Cla. AW	I G.	Dd.	I-R.	R.	Col.	Ros.		S-W.
‡‡Stewart	14X	1½	128	56	P-31x4½	P-31x4½	Buda.	4-3½x5½	Zeni.	Remy.	B.	‡Rem.	Cen.	B & B.	S P.	Dur.	N	Cla. AW	I G.	Dd.	E-R.	D	Col.	Ros.		S-C.
‡‡Stewart	9	1½	154	56	S*-34x3½	S*-34x6	Cont.	4-3½x5	Zeni.	Remy.	B.	‡Rem.	Cen.	Ful.	M D.	Ful.	N	Cla. 1D	I G.	Dd.	I-R.	R.	Col.	Gem.		S-W.
‡‡Stewart	7X	2½	156	58½	S*-31x4	S*-31x8	Buda.	4-4½x5½	Zeni.	Eise.	M	‡Rem.	Cen.	Ful.		Ful.		Cla. 2D	I G.	Dd.	E-R.	D	Col.	Ros.		S-C.
‡‡Stewart	10X	3½	165	70	S*-36x5	S*-36x12	Buda.	4-4¼x6	Zeni.	Eise.	M	‡Eise.	Cen.	Del.		Ful.		Cla. 3D	I G.	Dd.	E-R.	D	Col.	Ros.		S-C.
‡‡Stoughton	C	⅜	131	56	P-31x4½	P-31x4½	Midw.	4-3½x4½	Zeni.	Remy.	B.	Remy.	Non.	Del.	M D.	Cam.		Col. 52000	S B.	F F.	I-R.	R.	Col.	Lav.	S&N.	S-W.
‡‡Stoughton	A	1½	130	56	P-31x5	P-31x5	Wauk.	4-3½x5½	Stro.	Eise.	M	‡Dyn.	Cen.	B-L.	M D.	B-L.	N	She. W1001	Wo.	½ F	I-R.	R.	She.	Lav.	S&N.	S-W.
‡‡Stoughton	B	1½	140	57	S-36x3½	S-36x5	Wauk.	4-3½x5½	Stro.	Eise.	M	‡Dyn	Cen.	B-L.	M D.	B-L.	N	She. W1501	Wo.	½ F	I-R.	R.	She.	Lav.	S&N.	S-W.
‡‡Stoughton	D	2	140	59½	S-36x4	S-36x7	Herc.	4-4 x5½	Stro.	Eise.	M	‡Wet.	Cen.	B-L.	M D.	B-L.	O.	She. W103	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-W.
‡‡Stoughton	F	3	156	60	S-36x5	S-36x5d	Midw.	4-4½x5½	Zeni.	Eise.	M	‡Rem†	Non.	B-L.	M D.	B-L.	O.	She. W21	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-W.
‡‡Sullivan	E	2	150	61	S-36x4	S-36x7	Buda.	4-4½x5½	Stro.	Bosc.	M	‡Opt.	Non.	B-L.	M D.	B-L.	E.	Tim. 6560	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-W.
‡‡Sullivan	H	3½	156	68	S-36x5	S-36x5d	Buda.	4-4¼x6	Stro.	Opt.	M	‡Opt.	Cen.	B-L.	M D.	B-L.	E.	Tim. 6660	Wo.	F F.	I-R.	R.	Tim.	Ros.	S&N.	S-W.
Super Truck	50	2½	156	60½	S*-36x4	S*-36x8	Wisc.	4-4 x6	Zeni.	Bosc.	M	‡Vest.	Cen.	Ful.	M D.	Ful.	O.	She. W21	Wo.	½ F	I-R.	R.	She.	Ros.	C&L.	Opt.
Super Truck	70	3½	164	66	S-36x5	S-40x10	Wisc.	4-4½x6	Zeni.	Spli.	M	‡Vest.	Cen.	Ful.	M D.	Ful.	O.	She. W31	Wo.		I-R.	R.	She.	Ros.	S&N.	Opt.
Super Truck	100	5	164	74½	S-36x5	S-40x12	Wisc.	4-4½x6	Zeni.	Spli.	M	‡Vest.	Cen.	Ful.	M D.	Ful.	O.	She. W51	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-C.
‡‡Tiffin	GW	1½	135	60	S-36x3½	S-36x5	Cont.	4-4¼x5½	Sche.	Bosc.	M	Eis‡. We‡.	Cen.	Ful.	M D.	Ful.	O.	She. W103	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-C.
‡‡Tiffin	MW	2½	148	60	S-36x4	S-36x34d	Cont.	4-4¼x5½	Sche.	Bosc.	M	Eis‡. We‡.	Cen.	Ful.	M D.	Ful.	O.	She. W21	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-C.
‡‡Tiffin	F35	3½	160	66	S-36x5	S-40x5d	Cont.	4-4½x5½	Stro.	Bosc.	M	‡West.	Cen.	Del.	M D.	Cot.	O.	She. W31	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-C.
‡‡Tiffin	TW	5	168	74	S-36x6	S-40x6d	Cont.	4-4½x6	Sche.	Bosc.	M	‡West.	Cen.	B-L.	S P.	Cot.	O.	She. W51	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-C.
‡‡Tiffin	UW	6	168	74	S-36x6	S-40x12	Cont.	4-4½x6	Sche.	Bosc.	M	West.	Cen.	B & B.	S P.	Cot.	O.	She. W51	Wo.	½ F	I-R.	R.	She.	Ros.	S&N.	S-C.
‡‡Titan		2½	156	58	S-36x4	S-36x8	Buda.	4-4½x5½	Zeni.	Eise.	M	‡West	Cen.	B & B.	S P.	Cot.	O	Own.	D R	F F.	I-R.	D	Wis.	Lav.	S&N.	S-C.
‡‡Titan		3½	156	62	S-36x5	S-40x10	Buda.	4-4½x5½	Zeni.	Eise.	M	‡West.	Cen.	B & B.	S P.	Cot.	O.	Own.	D R	F F.	I-R.	D	Shu.	Lav.	S&N.	S-C.
‡‡Titan		5	156	62	S-36x5	S-40x12	Buda.	4-4½x6	Zeni.	Eise.	M	‡West.	Cen.	B & B.	S P.	Cot.	O.	Own.	D R	F F.	R-R.	D	Shu.	Lav.	S&N.	S-C.
Traffic	Speedboy	1½	128	56	P-35x5	P-35x5	Cont.	4-3½x5	Cart.	Bosc.	M	Bosc.	Non.	Cov.	M D.	Cov.	N	Rus. 341	I G.	Dd.	E-R.	R.	Own.	Own.	W&W.	S-W.
Traffic	4000	2	142	56	S*-34x3½	S*-34x6	Cont.	4-3½x5	Cart.	Bosc.	M	‡Bosc.	Suc.	Cov.	M D.	Cov.	O.	Rus. 341	I G.	Dd.	E-R.	R.	Own.	Own.	W&W.	S-W.
Traffic	6000	3	135	60	S*-36x4	S*-36x8	Cont.	4-3½x5	Cart.	Bosc.	M	‡Bosc.	Suc.	Cov.	M D.	Cov.	O.	Rus. 60001	I G.	Dd.	E-R.	R.	Tor.	Own.	W&W.	S-W.
‡‡Transport	15	1	128	56	P-32x4½	P-32x4½	Cont.	4-3½x5	Zeni.	Remy.	B.	Remy	Suc.	Ful.	M D.	Ful.	O.	Col. 51000	S B.	¾ F	E-R.	R.	Col.	Lav.	S&N.	S-W.
Transport	26	1½	140	56	S*-34x3½	S*-31x5	Buda.	4-3½x5½	Zeni.	Eise.	M	‡Rem.	Cen.	Ful.	M D.	Ful.	O.	Cla. 1D	I G.	F F.	E-R.	R.	Col.	Jac.	S&N.	S-W.
Transport	36	2	144	56	S*-36x3½	S*-36x6	Buda.	4-4 x5½	Zeni.	Eise.	M	‡Rem•	Cen.	Ful.	M D.	Ful.	O.	Cla. 1D	I G.	F F.	E-D.	R.	Col.	Jac.	S&N.	S-W.
Transport	61	3½	150	60	S*-36x4	S*-36x8	Buda.	4-4½x5½	Zeni.	Eise.	M	‡Rem.	Cen.	Ful.	M D.	Ful.	O.	Cla. 2D	I G.	F F.	E-D.	R.	Col.	Jac.	S&N.	S-W.
Transport	75	5	170	64	S*-36x5	S*-36x12	Buda.	4-4½x6	Zeni.	Eise.	M	‡Rem.	Cen.	B & B.	S P.	Cot.	O.	Cla. 3D	I G.	F F.	E-D.	R.	Shu.	Jac.	S&N.	D-C.
Traylor	B	1½	140	58	S-34x3½	S-34x6d	Buda.	4-3½x5½	Zeni.	Spli.	M	†West.	Non.	Cov.	M D.	Cov.	O.	She. W1501	Wo.	¾ F	I-R.	R.	She.	Ros.	S&N.	S-W.
Traylor	C	2	140	58	S*-36x4	S*-36x7d	Buda.	4-4 x5½	Zeni.	Spli.	M	†West.	Cen.	Cov.	M D.	Cov.	O.	She. W103	Wo.	¾ F	I-R.	R.	She.	Ros.	S&N.	S-W.
Traylor	D	3	150	58	S*-36x4	S*-36x8d	Buda.	4-4½x5½	Zeni.	Spli.	M	†West.	Cen.	Own.	M D.	Own.	O.	She. W21	Wo.	¾ F	I-R.	R.	She.	Ros.	S&N.	S-W.
Traylor	F	5	170	69	S*-36x5	S*-40x10d	Buda.	4-4½x6	Zeni.	Bosc.	M	†West.	Cen.	B-L.	M D.	B-L.	O.	She. W32	Wo.	¾ F	I-R.	R.	She.	Rod.	S&N.	
‡‡Triangle	AA	1	123	56	P-34x4½	P-34x4½	H-S.	4-3½x5	Stro.	N-E.	B.	N-E.	Non.	Ful.	M D.	Ful.	O.	Cla. 360	S B.	½ F	I-R.	R.	Tor.	Gem.	W&W.	S-W.
‡‡Triangle	A	1½	144	56	S*-34x4	S*-34x7	Wauk.	4-3½x5½	Stro.	Eise.	M	Eis‡. N-E‡.	Cen.	Ful.	M D.	Ful.	O.	Cla. 1D	I G.	F F.	E-D.	R.	Col.	Gem.	W&W.	S-W.
‡‡Triangle	C	2	147	58	S*-36x4	S*-36x7	Wauk.	4-3¾x5½	Stro.	Eise.	M	Eis‡. N-E‡.	Cen.	Ful.	M D.	Ful.	O.	Cla. 2D	I G.	F F.	E-D.	R.	Tor.	Gem.	W&W.	S-W.
‡‡Triangle	B	2½	150	58	S*-36x4	S*-36x8	Wauk.	4-4 x5½	Stro.	Eise.	M	‡Spli†.	Cen.	Ful.	M D.	Ful.	O.	Cla. 2D	I G.	F F.	E-D.	R.	Tor.	Gem.	W&W.	S-C.

For abbreviations see page 427.

American Gasoline Truck Specifications—Continued

MAKE AND MODEL	GENERAL: Tons Capacity	GENERAL: Wheelbase (Ins.) §	GENERAL: Track, Rear Axle (Ins.)	GENERAL: Tires: Type and Size, Front (Ins.)	GENERAL: Tires: Type and Size, Rear (Ins.)	ENGINE: Make	ENGINE: Number of Cylinders, Bore and Stroke (Ins.)	ENGINE: Carburetor Make	ELECTRICAL SYSTEM: Ignition: Make	ELECTRICAL SYSTEM: Ignition: Current Source	ELECTRICAL SYSTEM: Generator and Starter Make	Governor Type	TRANSMISSION: Clutch: Make	TRANSMISSION: Clutch: Type	TRANSMISSION: Gearset: Make	TRANSMISSION: Gearset: Power Take-off	REAR AXLE: Make and Model	REAR AXLE: Final Drive	REAR AXLE: Type	BRAKES: Service—Location and Type	BRAKES: Emergency—Location	MISCELLANEOUS: Steering Gear: Front Axle Make	MISCELLANEOUS: Steering Gear: Make	MISCELLANEOUS: Steering Gear: Type	MISCELLANEOUS: Wheels Type
‡‡United	¾	128	56	P-32x4½	P-32x4½	H-S...	4-3½x5	Zeni...	Bosc..	B.	Bosc..	Opt..	B & B.	S P...	Ful...	N	Col..31000	S B.	¾ F	E-R...	R.	Col..	Lav..	S&N..	S-W..
‡‡United	1½	148	56	P-34x5	P-34x5	Herc..	4-4 x5	Zeni...	Bosc..	B.	Bosc..	Cen..	B-L..	M D..	B-L..	O.	Col..52000	S B.	F F.	E-R...	R.	Shu..	Lav..	S&N..	S-W..
‡‡United	2	148½	58	P-34x4	S*-34x7	Herc..	4-4 x5	Zeni...	Bosc..	M	‡Bosc.	Cen..	B-L..	M D..	B-L..	O.	Wis....50	D R	¾ F	I-R...	R.	Shu..	Lav..	S&N..	S-W..
‡‡United	2½	156	58	C*-34x4	S*-34x8	Herc..	4-4 x5	Zeni...	Bosc..	M	‡Bosc.	Cen..	B-L..	M D..	B-L..	O.	Wis....60	D R	¾ F	I-R...	R.	Shu..	Lav..	S&N..	S-W..
‡‡United	3½	157	64	S-36x5	S-36x10	Herc..	4-4½x5½	Zeni...	Bosc..	M	‡Bosc.	Cen..	B-L..	M D..	B-L..	O.	Wis..B120	D R	¾ F	I-R...	R.	Con..	Lav..	S&N..	S-C...
‡‡United States	U	138	56	P-34x5	P-34x5	Buda..	4-3½x5½	Stro...	Bosc..	B.	Bosc..	Non..	Ful...	M D..	Ful...	N	Cla...B360	S B.	½ F	E-R...	R.	Shu..	Lav..	S&N..	S-W..
‡‡United States	N	144	56	S*-36x3½	S*-36x5	Buda..	4-3½x5½	Stro...	Bosc..	B.	‡Bosc.	None..	Ful...	M D..	Ful...	O.	Cla....1D	I G.		E-R...	R.	Shu..	Lav..	S&N..	S-W..
United States	NW	2	144½	59½	S*-36x4	S*-36x6	Buda..	4-3½x5½	Stro...	Bosc..	B.	‡Bosc.	None.	Ful...	M D.	Ful...	O.	She. W103	Wo.	½ F	I-R...	R.	Shu..	Lav..	S&N..	S-W..
United States	R	3	156	60	S*-36x4	S*-36x8	Hink..	4-4 x5½	Stro...	Eise..	M	‡Bosc.	Cen..	B-L..	M D.	B-L..	O.	She...W22	Wo.	½ F	I-R...	R.	Shu..	Lav..	S&N..	S-W..
United States	S	4	168	69½	S*-36x5	S*-36x5d	Hink..	4-4½x5½	Stro...	Eise..	M	‡Bosc.	Cen..	B-L..	M D.	B-L..	O.	She...W31	Wo.	½ F	I-R...	R.	She..	Lav..	S&N..	S-W..
United States	S	5	168	69½	S-36x6	S-40x6d	Hink..	4-4½x5½	Stro...	Eise..	M	‡Bosc.	Cen..	B-L..	M D.	B-L..	O.	She...W31	Wo.	½ F	I-R...	R.	She..	Lav..	S&N..	S-C...
United States	T	6	172	73½	S-36x7	S-40x7d	Buda..	4-4½x6½	Stro...	Eise..	M	Bosc..	Cen..	B-L..	M D.	B-L..	O.	She. W51	Wo.	½ F	I-R...	D	She..	Lav..	S&N..	S-C...
Velie	.52	1½	141	56	S*-36x4	S*-36x6	Herc..	4-3½x5½	Stro...	Ber!..	M	‡West.	Suc...	B & B.	S P...	Own..	O.	Tor.....C2	I G.	F F.	E-R...	R.	Col..	Ros...	W&W.	S-W..
‡‡Victer	.25	1½	131	56	P-33x5	P-33x5	Herc..	4-4 x5	Zeni...	A-L..	B.	A-L..	Cen..	Ful...	M D.	Ful...	O.	Col..52000	S B.	¾ F	E-R...	D	Col..	Lav..	S&N..	S-C...
‡‡Victer	.40	2½	135	57½	S*-34x3½	S*-34x5	Herc..	4-4 x5	Zeni...	Eise..	M	None.	Cen..	Ful...	M D.	Ful...	O.	Wis....50	D R	½ F	I-R...	R.	Shu..	Lav..	S&N..	S-C...
‡‡Victer	.50	3½	142	57½	S-34x4	S-34x7	Herc..	4-4 x5	Zeni...	Eise..	M	None.	Cen..	Ful...	M D.	Ful...	O.	Wis....65	D R	½ F	I-R...	R.	Shu..	Lav..	S&N..	S-C...
‡‡Victer	.60-70	4½	156	59½	S-36x4	S-36x8d	Herc..	4-4 x5	Zeni...	Eise..	M	None.	Cen..	Ful...	M D.	Ful...	O.	is...88E	D R	½ F	I-R...	R.	Shu..	Lav..	S&N..	S-C...
‡‡Victer	.80	6	194	64	S-36x5	S-36x10d	Cont..	4-4½x5½	Zeni...	Eise..	M	None.	Cen..	Ful...	M D.	Ful...	O.	Wis....120	D R	½ F	I-R...	R.	Shu..	Lav..	S&N..	S-C...
Vim	.50	½	....	56	P-32x4	P-32x4	Own..	4-4 x5	.....	.....	.....	.....	Own..	.....	Own..	N	Own.....	S B.	....	E-R...	R.	.....	.....	.....	S-W..
Walker-Johnson	L	1½	134	59	P-34x5	P-36x6	Hink..	4-3½x5½	Zeni...	Bosc..	M	Bosc..	None.	Ful...	M D.	Ful...	O.	Tim...6352	Wo.	½ F	I-R...	R.	Tim..	Ros...	.....	S-W..
Walker-Johnson	B	3	166	59	S*-36x5	S*-36x10	Hink..	4-4½x5½	Zeni...	Eise..	M	‡Bosc†	Cen..	Ful...	M D.	Ful...	O.	Tim...6560	Wo.	F F.	I-R...	R.	Tim..	Ros...	.....	S-W..
Walter	FR	7½	136	66	S-40x	S-40x6d	Wauk.	4-4½x6½	Zeni...	Apol.	M	West..	Cen..	M&E.	M D.	Own..	O.	Own.....	I G.	F F.	E-D.	R.	Own.	Ros...	C&L.	S-C...
‡‡Western		1½	144	56	S*-36x3½	S*-36x5	Buda..	4-3½x5	Stro...	Bosc..	M	‡Bosc†	Cen..	Ful...	M D.	Ful...	O.	Wis..800N	Wo.	½ F	I-R...	R.	Shu..	Lav..	S&N..	S-W..
‡‡Western		2½	151	58	S*-36x4	S*-36x8	Buda..	4-4½x5½	Stro...	Bosc..	M	‡Bosc†	Cen..	Ful...	M D.	Ful...	O.	Wis..900C	Wo.	½ F	I-R...	R.	Shu..	Lav..	S&N..	S-W..
‡‡Western		3½	126	62	S*-36x5	S*-40x10	Buda..	4-4½x6	Stro...	Bosc..	M	‡Bosc†	Cen..	Ful...	M D.	Ful...	O.	Wis..900E	Wo.	½ F	I-R...	R.	Shu..	Lav..	S&N..	S-W..
‡‡White	15-45	¾	143½	56	P-34x5	P-34x5	Own..	4-4½x5½	Zeni...	Opt...	M	‡L-N.	Cen..	Own..	S P...	Own..	O.	Own.....	S B.	½ F	E-R...	R.	Own.	Own..	W&S.	S-W..
White	15	¾	133½	56	P-34x5	P-34x5	Own..	4-3½x5½	Zeni...	Opt...	M	‡N-E.	Cen..	Own..	S P...	Own..	O.	Own.....	S B.	½ F	E-R...	R.	Own.	Own..	W&S.	S-W..
White	20	2	168	60½	S*-36x4	S*-36x7	Own..	4-3½x5½	Zeni...	Opt...	M	‡L-N.	Cen..	Own..	S P...	Own..	O.	Own.....	B R	½ F	E-R...	R.	Own.	Own..	W&S.	S-C...
White	20D	2	145½	60½	S*-36x4	S*-36x7	Own..	4-3½x5½	Zeni...	Opt...	M	‡N-E.	Cen..	Own..	S P...	Own..	N	Own.....	D R	½ F	E-R*	R.	Own.	Own..	W&S.	S-C...
White	20-45	2	168	60½	S*-36x4	S*-36x7	Own..	4-4½x5½	Zeni...	Opt...	M	‡L-N.	Cen..	Own..	S P...	Own..	O.	Own.....	D R	½ F	E-D.	R.	Own.	Own..	W&S.	S-C...
White	40	3	174	61½	S*-36x5	S*-40x5d	Own..	4-4½x5½	Zeni...	Opt...	M	‡L-N.	Cen..	Own..	S P...	Own..	O.	Own.....	D R	F F.	E-D.	R.	Own.	Own..	W&S.	S-C...
White	40D	3	156	61½	S*-36x5	S*-40x5d	Own..	4-4½x5½	Zeni...	Opt...	M	‡L-N.	Cen..	Own..	S P...	Own..	O.	Own.....	D R	F F.	E-D.	R.	Own.	Own..	W&S.	S-C...
White	45	5	174	65½	S-36x6	S-40x6d	Own..	4-4½x5½	Zeni...	Opt...	M	‡L-N.	Cen..	Own..	S P...	Own..	N	Own.....	D R	F F.	E-D.	R.	Own.	Own..	W&S.	S-C...
White	45D	5	156	65½	S-36x6	S-40x6d	Own..	4-4½x5½	Zeni...	Opt...	M	‡L-N.	Cen..	Own..	S P...	Own..	O.	Own.....	D R	F F.	E-D.	R.	Own.	Own..	W&S.	S-C...
§§Wichita	K	1	144	56	S*-36x3	S*-36x4	Wauk.	4-3½x5½	Stro...	Eise..	M	‡N-E.	Cen..	Own..	Co...	B-L..	E.	She.W1500	Wo.	½ F	I-R...	R.	She..	Ros...	S&N..	S-W..
§§Wilcox	AA	1	130	56	S*-35x5	S*-35x5	Buda..	4-3½x5½	Stro...	Bosc..	M	‡West.	Cen..	B-L..	M D.	B-L..	O.	Rus.3600B	T B.	½ F	I-R...	R.	Shu..	Gem..	W&W.	S-W..
§§Wilcox	BB	1½	144	58	S*-36x6	S*-38x7	Own..	4-4½x5	Stro...	Bosc..	M	West..	Cen..	B-L..	M D.	Own..	E.	Wal....2A	D R	F F.	E-D.	R.	Shu..	Own..	W&W.	S-C...
§§Wilcox	CC	2½	150	58	S*-36x6	S*-40x8	Own..	4-4½x5	Stro...	Bosc..	M	‡West.	Cen..	B&B..	M D..	Own..	N	Wal...25A	D R	F F.	E-D.	R.	Shu..	Own..	W&W.	S-C...
§§Wilcox	EE	3½	162	63½	S-36x5	S-36x10	Buda..	4-4½x6	Stro...	Bosc..	M	‡West.	Cen..	M&E.	M D..	Own..	N	Wal....5A	D R	F F.	E-D.	R.	She..	Own..	W&W.	S-C...
§§Wilcox	F	5	162	67½	S-36x5	S-40x12	Buda..	4-4½x6½	Stro...	Bosc..	M	†Opt..	Cen..	M&E.	M D..	Own..	N	Wal....5A	D R	F F.	E-D.	R.	She..	Own..	W&W.	S-C...
§§Winter & Hirsch.	K	2½	152	58½	S-36x4	S-36x8	Cont..	4-4½x5½	Stro...	Bosc..	M	‡Bosc.	Hyd..	B-L..	M D.	B-L..	O.	Tim...6560	Wo.	F F.	I-R...	R.	Tim..	Ros...	S&N..	S-W..
§§Winter & Hirsch	L	3½	178	65½	S-36x5	S-40x10	Cont..	4-4½x5½	Stro...	Bosc..	M	‡Bosc.	Hyd..	B-L..	M D.	B-L..	O.	Tim...6660	Wo.	F F.	I-R...	R.	Tim..	Ros...	S&N..	S-W..
§§Winther	751	¾	135	56	P-34x4½	P-35x5	H-S...	4-3½x5	Stro...	West..	B.	West..	Non..	War..	M D..	War...		Tor..OX2L	I G.	F F.	E-R...	D	Tor..	Lav..	S&N..	S-W..
§§Winther	752	1	135	56	P-34x5	P-34x5	Wisc..	4-4 x5	Stro...	A-L..	B.	A-L..	Non..	Ful...	M D..	Ful...	N	Tim...6250	Wo.	½ F	I-R...	R.	Tim..	Ros...	S&N..	S-W..
§§Winther	39	1½	140	56	S-34x3½	S-34x5	Wisc..	4-3½x5	Stro...	Eise..	M	‡Opt..	Non..	Ful...	M D..	Ful...	O.	Own.....	I G.	F F.	E-R...	D	Col..	Lav..	S&N..	S-C...
§§Winther	452	2½	150	56	S-36x6	S-36x5d	Wisc..	4-4 x6	Mast...	Eise..	M	‡West.	Non..	Ful...	M D..	Ful...	O.	Cla....2D	I G.	F F.	E-D.	D	Own.	Lav..	S&N..	S-C...
§§Winther	51	2½	150	62	S-36x4	S-36x4d	Wisc..	4-4 x6	Mast...	Eise..	M	‡Opt..	Non..	B & B.	S P...	B-L..	O.	Cla....2D	I G.	F F.	E-R...	R.	Tor..	Ros...	S&N..	S-C...
§§Winther	70	3½	150	70	S-36x5	S-36x5d	Wisc..	4-4½x6	Mast...	Eise..	M	‡West.	Non..	B & B.	S P...	B-L..	O.	Cla....3D	I G.	F F.	E-R...	R.	Tim..	Ros...	S&N..	S-C...
§§Winther	109	5	162	67	S-36x5	S-40x6d	Wisc..	4-4½x6	Mast...	Eise..	M	‡West.	Non..	B & B.	S P...	B-L..	O.	Cla....4D	I G.	F F.	E-R...	R.	Tim..	Ros...	S&N..	S-C...
§§Winther	149	7	162	67	S-36x6	S-40x7d	Wisc..	4-5 x6	Mast...	Eise..	M	‡West.	Non..	B & B.	S P...	B-L..	O.	Cla....5D	I G.	F F.	E-R...	R.	Tim..	Ros...	S&N..	S-C...
§§Wisconsin	B	1	136	56	P-34x5	P-34x5	Cont..	4-3½x5	Stro...	Bosc..	B.	Bosc..	Non..	B-L..	M D..	B-L..	O.	Tim.....	Wo.	¾ F	I-R...	R.	Con..	Lav..	S&N..	S-W..
§§Wisconsin	C	1½	144	56	P-34x5	P-36x6	Cont..	4-3½x5	Stro...	Bosc..	B.	Bosc..	Hyd..	B-L..	M D..	B-L..	O.	Tim.....	Wo	¾ F	I-...	..	Con..	Lav..	S&N..	S-W..
§§Wisconsin	D	2	146	57½	S*-36x6	S*-38x7	Wauk.	4-4x5½	Stro...	Eise..	M	Bosc..	Cen..	B-L..	M D..	B-L..	O.	Tim.....	Wo.	¾ F	I-R...	R.	Con..	Lav..	S&N..	S-W..
§§Wisconsin	E	2½	146	58½	S*-36x5	S*-36x10	Wauk.	4-4½x5½	Stro...	Eise..	M	Bosc..	Cen..	B-L..	M D..	B-L..	O.	Tim.....	Wo.	¾ F	I-R...	R.	Con..	Lav..	S&N..	S-W..
Yellow Cab	T1	1	130	56	P-33x5	P-33x5	Cont..	4-3½x5	Zeni...	Bosc..	M	N-E..	Non..	B-L..	M D..	B-L..	N	Tim...5773	S B.	½ F	E-R...	D	Tim..	Gem..	.....	D-P...

CANADIAN

Gotfredson	20	1	131	56	P-34x5	P-34x5	Buda..	4-3¾x5½	Zeni...	Bosc..	M	A-K..	Non..	B-L..	S P...	B-L..	N	Tim..6250	Wo.	½ F	I-R...	R.	Tim..	Gem..	W&W.	S-C...
Gotfredson	40	1½	144	58	P-36x6	S-38x7	Buda..	4-4 x5½	Zeni...	Bosc..	M	A-K..	Non..	B-L..	M D..	B-L..	O.	Tim..6460	Wo.	½ F	I-R...	R.	Tim..	Gem..	W&W.	S-M...
Gotfredson	50	2½	152	58½	S*-36x4	S*-36x8	Buda..	4-4½x5½	Zeni...	Bosc..	M	†A-K‡	Non..	B-L..	M D..	B-L..	O.	Tim..6560	Wo.	F F.	E-D.	R.	Tim..	Gem..	W&W.	S-C...
Gotfredson	80	4	160	65½	S-34x5	S-36x12	Buda..	4-4½x6	Zeni...	Bosc..	M	†A-K‡	Cen..	B-L..	M D..	B-L..	O.	Tim..6666	Wo.	F F.	E-D.	R.	Tim..	Gem..	W&W.	S-C...
Gotfredson	100	5	166½	69½	S-36x6	S-40x14	Buda..	4-5 x6½	Zeni...	Bosc..	M	†A-K‡	Non..	B-L..	M D..	B-L..	O.	Tim...6760	Wo.	F F.	E-D.	R.	Tim..	Gem..	W&W.	S-C...
§§Mapleleaf	Exp.	1½	144	57	P-34x5	P-36x6	Hink..	4-3½x5½	Stro...	Eise..	M	West‡	Cen..	Ful...	M D..	Ful...	O.	She.W1501	Wo.	½ F	I-R...	R.	She..	Ros...	S&N..	S-C...
§§Mapleleaf	AA	2	144	62	S-36x4	S-36x7	Hink..	4-4 x5½	Stro...	Eise..	M	West‡	Cen..	Ful...	M D..	Ful...	O.	She...W103	Wo.	½ F	I-R...	R.	She..	Ros...	S&N..	S-W..
§§Mapleleaf	BB	3	150	58	S-36x4	S-36x8	Hink..	4-4½x5½	Stro...	Eise..	M	None.	Cen..	Ful...	M D..	Ful...	O.	She...W21	Wo.	½ F	I-R...	R.	She..	Ros...	S&N..	S-C...
§§Mapleleaf	CC	4	160	66	S-36x5	S-36x10	Hink..	4-4½x5½	Stro...	Eise..	M	None..	Cen..	Ful...	M D..	Ful...	..	She...W31	Wo.	½ F	I-R...	R.	She..	Ros...	S&N..	S-C...
§§Mapleleaf	DD	5	160	73½	S-36x6	S-36x12	Hink..	4-4½x5½	Stro...	Eise..	M	None..	Cen..	Ful...	M D..	Ful...	O.	She...W51	Wo.	Dd..	I-R...	R.	She..	Ros...	S&N..	S-C...
National	FA	1	136	56	P-35x5	P-35x5	Wauk.	4-3¾x5½	Zeni...	Eise..	M	N-E‡	Cen..	B-L..	M D..	B-L..	O.	Tim...6352	Wo.	¾ F	I-R...	R.	Tim..	Ros...	S&N..	S-W..
National	GA	1½	140	58	S*-34x4	S*-34x5	Wauk.	4-3¾x5½	Zeni...	Eise..	M	N-E‡	Cen..	B-L..	M D..	B-L..	O.	Tim...6460	Wo.	¾ F	I-R...	R.	Tim..	Ros...	S&N..	S-W..
National	HE	2½	152	58½	S*-36x5	S*-36x10	Wauk.	4-4¾x5½	Zeni...	Eise..	M	†N-E‡	Cen..	H S..	M O..	B-L..	O.	Tim...6560	Wo.	F F.	I-R...	R.	Tim..	Ros...	S&N..	S-C...
National	NB	3½	154	65½	S*-36x6	S*-36x6d	Wauk.	4-4½x6½	Zeni...	Eise..	M	†N-E‡	Cen..	He S..	M O..	B-L..	O.	Tim...6666	Wo.	F F.	I-R...	R.	Tim..	Ros...	S&N..	S-C...
National	OA	5	164	69½	S-36x6	S-40x6d	Wauk.	4-5 x6½	Zeni...	Eise..	M	†N-E‡	Cen..	He S..	M O..	B-L..	O.	Tim...6760	Wo.	F F.	I-R...	R.	Tim..	Ros...	S&N..	S-C...
§§Veteran	D	2½	156	58	S-36x4	S-36x7	Buda..	4-4½x5½	Zeni...	Eise..	M	None..	Cen..	B & B.	S P...	Cot...	N	She...W21	Wo.	....	I-R...	R.	She..	Ros...	S&N..	S-C...
§§Veteran	H	3½	156	69½	S-36x5	S-36x10	Buda..	4-4½x6	Zeni...	Eise..	M	None..	Cen..	B & B.	S P...	Cot...	N	She...W31	Wo.	½ F	I-R...	R.	She..	Ros...	S&N..	S-C...

ABBREVIATIONS—TRUCKS:

*—Pneumatics Optional at extra cost
‡—Optional at extra cost
**—Equipped with starter only
†—Equipped with generator only
§§—Taken from 1923 specifications
‡‡—Recommended for bus use
††—Truck Tractor
§—Standard Wheelbase

A-K—Atwater-Kent
A-L—Auto-Lite
Apol—Apollo
B—Battery
B&B—Borg & Beck
Benn—Bennett
Berl—Berling
Biju—Bijur
B-L—Brown-Lipe
Bosc—Bosch
BPS—Bevel, Pinion and Sector
C—Cushion
Cam—Campbell
Cart—Carter
Cen—Centrifugal
Ch—Chain
C&L—Cam and Lever
Cla—Clark
Co—Cone
Col—Columbia
Con—, **Cont**— } Continental
Cov—Covert
Cot—Cotta
Conn—Connecticut
D—Drive Shaft
D-C—Disk-Cast Steel
Dd—Dead
D-P—Disk-Pressed Steel
Det—Detroit
Del—Detlaff
Delc—Delco
Dod—Dodge
D-R—Double Reduction
D-W—Disk Wood
Dur—Durston
Dyn—, **Dyne**— } Dyneto
Eat—Eaton
E—Standard Equipment
E-D—External Driveshaft
E-F—Front wheels only
E-J—External Jackshaft
Eis—, **Eise**— } Eisemann
E-R—External Rear Wheels
Ensi—Ensign
FF—Full Floating
½ F—Semi Floating
¾ F—Three Quarter Floating
Fli—Flint
Ful—Fuller
G&D—Gray & Davis
Gem—Gemmer
HaS—Hall Scott
Herc—Hercules
HeS—Hele-Shaw
Hink—Hinkley
Holl—Holley
Hoo—Hoosier
H-S—Herschell-Spillman
Hyd—Hydraulic
I-A—All four wheels
I-G—Internal Gear
I-R—Internal Rear Wheel
Jac—Jacox
John—Johnson
Lav—Lavine
L-N—Leece-Neville
Lyco—Lycoming
M—Magneto
Mast—Master
Marv—Marvel
MD—Multiple Dry Disk
Mec—Mechanics
Midw—Midwest
MO—Multiple Disk in Oil
Mun—Muncie
M&E—Merchant and Evans
N-E—North East
N—No provision
Non—None
O—Optional at extra cost
Opt—Optional
P—Pneumatics
Pla—Planetary
R—Rear Wheels
Rayf—Rayfield
Re—, **Rem**— } Remy
Ros—Ross
Rus—Russell
S—Solid
Sal—Salisbury
SB—Spiral Bevel
Sche—Schebler
S-C—Spoked-Cast Steel
S-D—Steel-Disk
She—Sheldon
Shu—Shuler
S-M—Spoked-Malleable Iron
S&N—Screw and nut
Spe—Special
Sta—Standard
Stew—Stewart
Spli—Splitdorf
S-P—Single Plate
Suc—Suction
S-W—Spoked Wood
Stro—Stromberg
T-B—Straight Bevel
T-D—Twin Disk
Till—Tillotson
Tim—Timken
Tor—Torbenson
Ves—Vesta
Vul—Vulcan
Wal—Walker
War—Warner
Wauk—Waukesha
We—, **Wes**— } Westinghouse
Wis—, **Wise**— } Wisconsin
West—Westinghouse
Woh—Wohlrab
Wo—Worm
W&S—Worm and Sector
W&W—Worm and Wheel
Zeni—Zenith

Six-Wheelers Hold Attention of British Truck Builders

IN 1922 it was an exceptional event if a British truck maker introduced a new model but during the past six months new models in considerable numbers have been announced. The latter are mainly either six-wheelers (semi-trailer type) or range from 2300 to 4600 lb. load capacities.

Until a year or two back it could be said that the British truck industry as a whole specialized upon 3-4 tonners but now as much if not more attention is being given to 1½, 2 and 2½ ton load models, and as a result it is found that these comprise approximately 50 per cent of the total. They include half a dozen examples of passenger car chassis offered with industrial bodywork but all the models for loads of from 1 ton upward are truck chassis pure and simple.

Only a very small proportion of the lighter types of chassis, except the passenger car adaptations are designed for use with pneumatic tires alone. Solid tires are standard equipment with the majority, though a few examples have "cushion" tires, viz., the all-rubber type with either air-cores or pronounced indentations in tread and walls that result in increased flexibility. This latter type of tire has been fitted to the rear wheels of a large number of Ford one-tonners by British users, displacing the original pneumatics.

The last statement illuminates the frame of mind of most British truck users. They cannot appreciate the advantages of pneumatics, and it must be conceded that so far as the effect of vibration upon the chassis is concerned certain of the cushion tires used on Ford one-tonners appear to be no detriment and give remarkably long mileages. Then, too, the makers of light and fast trucks which will run on solids maintain that even though when pneumatics are fitted the latter must carry more chassis weight than is really necessary, the saving in wear and tear of the relatively heavy parts more than compensates for the lower fuel efficiency due to the additional weight. Therefore, they say, it is better policy to make chassis with which the question of tires can be left to the choice of the prospective buyer.

Six makers up to the present have introduced a new type complying with the requirements of the War Department's £40 a year Subsidy scheme, referred to in AUTOMOTIVE INDUSTRIES of Aug. 23 last. This scheme calls for a 1½ ton load chassis capable of running at 25 m.p.h. on pneumatic tires, together with numerous other characteristics of design or performance. Although a maximum weight of 3800 lb. is specified, three of those six makers are able to offer private users solid tires at option. These 1½ ton Subsidy models are made relatively expensive in complying with the official specification, the chassis prices ranging from £585 to £890, which compares with a new A. E. C. 2-2½ tonner of equally high grade at £495 designed with more consideration for production costs without detriment in other respects from the standpoint of the commercial user.

British Truck Design Trends

	Percentage
Cylinder Head	
Detachable	44
Integral	56
Valve Arrangement	
Side	78.5
Overhead	11
Both sides	6
Inlet over exhaust	3
Sleeve	1.5
Camshaft Drive	
Helical gear	47
Chain	32
Spur gear	14
Bevel gears	5.5
Eccentric rods	1.5
Water Circulation	
Pump	81
Thermo syphon	19
Engine Lubrication	
Splash	31
Hollow crankshaft	31
Splash and pressure	30.5
Full pressure	7.5
Fuel Feed	
Gravity	84
Vacuum	16
Ignition	
Magneto	94
Battery	4.5
Magneto and battery	1.5

	Percentage
Electric Starter	
No. 1 fitted	62.5
Extra	30
Standard	7.5
Clutch: Type	
Cone	70.5
Single dry plate	16
Dual dry plate	7.5
Multi dry plate	3
Multi plate in oil	3
Number of Gears	
Four	84
Three	16
Gearshift Lever	
Right-hand	75
Central	20
Optional	5
Rear Axle: Type	
Full floating	88
Semi-floating	12
Final Drive	
Worm gear	63
Double reduction (bevel and spur)	16
Side chains	13
Spiral bevel	6.5
Internal gear	1.5
Propulsion: Taken by	
Springs	67
Torque tube	18

	Percentage
Radius rods	13
Torque arm	2
Torque Taken by	
Springs	65
Torque tube	20
Torque arm	9
Radius rods	6
Brakes	
Pedal:	
External transmission	58
Internal rear wheels	35
Internal transmission	7
Hand:	
Internal rear wheels	90
External transmission	4
External rear wheels	3
Internal transmission	1.5
Internal front wheels	1.5
Steering Gear Type	
Worm and worm wheels	46
Worm and segment	37
Screw and nut	14
Planetary	1.5
Cam	1.5
Chassis Lubrication	
Grease cups	72
Pressure gun	18
Oil cups	10

British Gasoline Truck

MAKE	GENERAL						ENGINE												ELECTRICAL SYSTEM			
	Load Capacity, Long Tons	Wheelbase (Ins.)	Track (Ins.)	Tire Size and Type		Chassis Weight (Lbs.)	Bore and Stroke (Ins.)	Point Suspension in Main or Sub-frame	Cylinder Head	Valve Arrangement	No. of Cylinders Cast in One Piece	Cylinders, Integral with Crankcase	Camshaft		Water Circulation	Oiling System	Fuel System		Ignition Make	Current Source	Generator	Starter
				Front (Ins.)	Rear (Ins.)								Drive	Gear Material			Carbureter Make	Fuel Feed				
A. E. C.	2	144	60	S-36x4	S-36x4d	5152	4.00x5.50	3-Mn...	Det...	L...	4	Int...	Heli...	St...	Th S...	Splash...	Zenith...	Grav....	Delco....	Bat...	Yes	No.
A. E. C.	3–4	179	72	S-42x4¾	S-42x4¾d	7060	4.25x5.50	4-Mn...	Int...	L...	2	Sep...	Chain...	No...	Pump...	Sp Pr...	Zenith...	Grav....	Connor....	Mag.	No.	No.
A. E. C.	5	170	70	S-40x5½	S-40x5½d	7400	4.72x5.90	4-Mn...	Int...	L...	2	Sep...	Chain...	No...	Pump...	Sp Pr...	Zenith...	Grav....	Connor....	Mag.	No.	No.
A. E. C.†	10	129	73	S-36x5½	S-36x5½d	.....	5.31x6.70	4-Su....	Int...	L...	2	Sep...	Heli...	St....	Pump...	Splash...	Zenith...	Grav....	Delco....	Bat.	Yes	No.
Albion	1½	135	61	S-32x4	S-32x3½d	3800	3.85x5.00	4-Mn...	Det...	L...	4	Sep...	Heli...	St....	Pump...	Sp Pr...	Zenith...	Grav....	Opt.....	Mag.	No.	No.
Albion	3	157	66	S-32x4	S-32x4¾d	5500	4.50x5.00	4-Mn...	Int...	L...	4	Sep...	Spur...	St....	Pump...	Sp Pr...	Zenith...	Grav....	Opt.....	Mag.	No.	No.
Austin	¼	75	40	P-26x3	P-26x3	800	2.20x3.00	3-Mn...	Det...	L...	4	Sep...	Heli...	St....	Th S....	Splash...	Zenith...	Grav....	Opt.....	Mag.	Yes	Yes
Austin	½	112	52	P-30x4	P-30x4	1400	2.80x4.00	3-Mn...	Det...	L...	4	Sep...	Chain...	No...	Pump...	Pr Cs...	Zenith...	Vacu....	Opt.....	Mag.	Yes	Yes
Austin	¾	130	56	P-32x4½	P-32x4½	2100	3.75x5.00	3-Mn...	Det...	L...	4	Sep...	Chain...	No...	Pump...	Pr Cs...	Zenith...	Vacu....	Opt.....	Mag.	Yes	Yes
Beardmore	1¼	138	55	P-36x5½	P-36x5½	2360	3.12x4.75	4-Su....	Det...	L...	4	Sep...	Chain...	No...	Pump...	Fl Pr...	Zenith...	Grav....	Opt.....	Mag.	Ex.	Ex.
Belsize	¾	99	56	P-32x4	P-32x4	1100	3.54x4.33	3-Mn...	Int...	L...	4	Sep...	Chain...	No...	Pump...	Pr Cs...	Zenith...	Vacu....	Bosch....	Mag.	No.	No.
Bristol	2	133	62	S-34x4	S-34x4d	4030	3.75x5.00	3-Mn...	Det...	L...	4	Sep...	Chain...	No...	Th S....	Splash...	Claudel.	Vacu....	Simms....	Mag.	Yes	No.
Bristol	4	173	74	S-40x4¾	S-40x4¾d	7050	4.50x5.75	3-Mn...	Int...	L...	2	Sep...	Chain...	No...	Th S....	Splash...	Claudel.	Grav....	Simms....	Mag.	No.	No.
Churchill	3½	177	64	S-32x4¾	S-36x4½d	6500	5.00x6.00	4-Mn...	Int...	L...	2	Sep...	Heli....	St....	Pump...	Pr Cs...	Claudel.	Grav....	Opt.....	Mag.	No.	No.
Clyde	1½	122	60	P-36x4¾	C-34x4	3700	3.75x5.12	3-Mn...	Det...	L...	4	Sep...	Heli....	Ci....	Pump...	Pr Cs...	Zenith...	Grav....	Opt.....	Mag.	Ex.	Ex.
Clyde	3	168	60	S-32x4¾	S-32x4¾d	5500	4.37x5.50	3-Su....	Int...	L...	2	Sep...	Heli....	Ci....	Pump...	Pr Cs...	Zenith...	Grav....	Opt.....	Mag.	Ex.	No.
Commer	2	13	60	S-36x4	S-36x4d	4480	3.93x4.72	3-Mn...	Int...	L...	2	Sep...	Spur....	St....	Th S....	Splash...	Claudel.	Grav....	Simms....	Mag.	Ex.	No.
Commer	3–4	152	69	S-36x4¾	S-36x4¾d	6500	4.33x5.50	3-Mn...	Int...	L...	2	Sep...	Spur....	St....	Th S....	Splash...	Claudel.	Grav....	Simms....	Mag.	Ex.	No.
Commer	5	151	73	S-36x4¾	S-36x4¾d	7400	4.72x5.50	3-Mn...	Int...	L...	2	Sep...	Spur....	St....	Th S....	Splash...	Claudel.	Grav....	Simms....	Mag.	Ex.	No.
Crossley	¾	138	54	P-36x5½	P-36x4¾d	3020	4.00x5.50	3-Mn...	Int...	L...	2	Sep...	Chain...	No...	Pump...	Pr Cs...	Smith...	Vacu....	Simms....	Mag.	Yes	Yes
Crossley	1½	140	57	P-36x6	P-36x7	4810	4.31x5.50	3-Su....	Int...	L...	2	Sep...	Chain...	No...	Pump...	Pr Cs...	Smith...	Vacu....	Simms....	Mag.	Ex.	Ex.
Cubitt	¾	120	54	P-32x4	P-32x4	2240	3.12x5.50	4-Mn...	Det...	L...	4	Int...	Heli...	N M.	Th S....	Pr Cs...	.....	Vacu....	Rotax....	Bat.	Yes	Ex.
Daimler	2½	131	63	S-36x4	S-36x4d	6600	3.74x5.50	3-Mn...	Det...	S...	2	Sep...	Chain...	No...	Pump...	Sp Pr...	Own....	Grav....	Opt.....	Mag.	Ex.	No.
Dennis	1½	122	56	S-31x3	S-34x4	2570	3.46x4.72	3-Mn...	Det...	L...	4	Sep...	Heli....	St....	Pump...	Sp Pr...	Claudel.	Grav....	B L I C..	Mag.	Yes	Ex.
Dennis	2½	14	62	S-31x4	S-40x4d	5300	4.13x5.90	4-Su....	Int...	T...	2	Sep...	Spur....	St....	Pump...	Sp Pr...	Claudel.	Grav....	Simms....	Mag.	Ex.	No.
Dennis	4–6	150	66	S-36x4¾	S-40x4¾d	7050	4.52x5.90	4-Su....	Int...	T...	2	Sep...	Spur....	St....	Pump...	Sp Pr...	Claudel.	Grav....	Simms....	Mag.	Ex.	No.
Guy	1	11	56	P-32x4	P-32x4d	2350	3.34x4.72	3-Mn...	Det...	L...	4	Sep...	Heli...	N M.	Th S....	Splash...	Zenith...	Grav....	Lucas....	Mag.	Ex.	Ex.
Guy	2½	142	63	S-30x3½	S-30x3½d	4240	4.00x5.50	4-Su....	Det...	L...	4	Sep...	Chain...	No...	Th S....	Splash...	Zenith...	Grav....	Lucas....	Mag.	Ex.	No.
Guy	1¾	131	56	S-30x3	S-30x3d	2700	3.46x4.72	3-Mn...	Det...	L...	4	Sep...	Heli....	N M.	Th S....	Splash...	Zenith...	Grav....	Lucas....	Mag.	Ex.	No.
Halley	1¾	145	58	P-36x6	P-36x7	4920	4.00x5.25	4-Mn...	Det...	L...	4	Sep...	Heli....	N M.	Th S....	Splash...	Zenith...	Grav....	Opt.....	Mag.	Ex.	Ex.
Halley	3½	160	61	S-36x4¾	S-36x4¾d	6500	§3.50x6.00	4-Su....	Det...	L...	3	Sep...	Chain...	No...	Pump...	Splash...	Zenith...	Grav....	Opt.....	Mag.	Ex.	Ex.
Halley	6	150	66	S-36x4¾	S-36x4¾d	6700	§4.00x6.00	4-Su....	Det...	L...	3	Sep...	Chain...	No...	Pump...	Splash...	Zenith...	Grav....	Opt.....	Mag.	Ex.	Ex.
Halley	5½	168	67	S-36x4¾	S-40x5½d	8400	§5.00x6.50	4-Mn...	Det...	L...	2	Sep...	Heli....	St....	Pump...	Splash...	Zenith...	Grav....	Opt.....	Mag.	Ex.	Ex.
Halley	4–6	150	61	S-36x4¾	S-36x4¾d	7280	5.25x6.50	4-Mn...	Det...	L...	2	Sep...	Heli....	N M.	Pump...	Splash...	Zenith...	Grav....	Opt.....	Mag.	Ex.	Ex.
Hallford	1¾	130	64	S-32x4	S-36x4d	5050	3.90x5.50	3-Su....	Int...	L...	2	Sep...	Spur....	St....	Pump...	Splash...	Zenith...	Grav....	Opt.....	Mag.	Ex.	No.
Hallford	3	140	70	S-36x4¾	S-40x4¾d	7280	4.33x5.50	4-Su....	Int...	L...	2	Sep...	Heli....	St....	Pump...	Sp Pr...	Zenith...	Grav....	Opt.....	Mag.	Ex.	No.
Hallford	5	180	72	S-36x5½	S-40x5½d	7730	4.72x5.50	4-Su....	Int...	L...	2	Sep...	Heli....	St....	Pump...	Sp Pr...	Zenith...	Grav....	Opt.....	Mag.	Ex.	No.
Karrier	1	120	56	P-32x4½	P-33x5	2660	3.37x5.00	3-Mn...	Det...	L...	4	Sep...	Heli....	Ci....	Pump...	Sp Pr...	Zenith...	Grav....	Lucas....	Mag.	Ex.	No.
Karrier	1½	132	56	P-36x6	P-38x7	3360	4.00x5.00	3-Mn...	Int...	L...	2	Sep...	Heli....	St....	Pump...	Sp Pr...	Zenith...	Grav....	Lucas....	Mag.	Ex.	No.
Karrier	2	108	56	S-36x3½	S-36x3½d	3800	3.75x5.50	3-Su....	Det...	L...	4	Sep...	Chain...	St....	Pump...	Pr Cs...	Zenith...	Grav....	Lucas....	Mag.	Ex.	No.
Karrier	3	168	66	S-36x4	S-36x4¾d	7700	4.50x6.00	3-Mn...	Int...	L...	2	Sep...	Chain...	St....	Pump...	Sp Pr...	Zenith...	Grav....	Lucas....	Mag.	Ex.	No.
Karrier	4	168	66	S-36x4¾	S-40x4¾d	7900	4.75x6.00	3-Mn...	Int...	L...	2	Sep...	Chain...	St....	Pump...	Sp Pr...	Zenith...	Grav....	Lucas....	Mag.	Ex.	No.
Karrier	5	168	66	S-36x4¾	S-40x4¾d	8100	5.00x6.00	3-Mn...	Int...	L...	2	Sep...	Chain...	St....	Pump...	Sp Pr...	Zenith...	Grav....	Lucas....	Mag.	Ex.	No.
Leyland	1½	126	58	P-38x7	P-38x7	3800	3.50x5.50	3-Mn...	Det...	I...	4	Int...	EccRods	St....	Pump...	Sp Pr...	Claudel.	Grav....	Opt.....	Mag.	Ex.	No.
Leyland	2	141	66	S-31x4	S-36x4d	5710	4.50x5.00	4-Mn...	Int...	L...	2	Sep...	Heli....	St....	Pump...	Pr Cs...	Claudel.	Grav....	Simms....	Mag.	Ex.	Ex.
Leyland	3	168	64	S-40x4½	S-40x4½d	7840	4.62x6.00	4-Mn...	Int...	L...	2	Sep...	Heli....	St....	Pump...	Pr Cs...	Claudel.	Grav....	Simms....	Mag.	Ex.	Ex.
Leyland	4–6	190	65	S-36x6	S-42x6d	8300	5.00x6.00	4-Mn...	Int...	L...	2	Sep...	Heli....	St....	Pump...	Pr Cs...	Claudel.	Grav....	Simms....	Mag.	Ex.	No.
Leyland	.....	150	66	S-36x4¾	S-36x4¾d	10500	§5.00x6.50	4-Mn...	Int...	L...	2	Sep...	Heli....	St....	Pump...	Pr Cs...	Claudel.	Grav....	Simms....	Mag.	Ex.	No.
Leyland	.....	162	66	S-36x4¾	S-36x4¾d	11100	§5.50x6.50	8-Mn...	Int...	L...	2	Sep...	Heli....	St....	Pump...	Pr Cs...	Claudel.	Grav....	Opt.....	B&M	Ex.	No.
L. V. L.	1½	120	56	S-32x3	S-32x3d	2910	3.12x5.12	3-Mn...	Det...	L...	4	Int...	Heli....	Ci....	Pump...	Sp Pr...	Zenith...	Grav....	B T H....	Mag.	Ex.	No.
Maudslay	1½	144	69	P-36x6	P-38x7	3700	3.90x5.12	4-Su....	Det...	I...	4	Sep...	Bevel...	St....	Pump...	Fl Pr...	Zenith...	Grav....	Opt.....	Mag.	No.	No.
Maudslay	3	162	66	S-34x4¾	S-40x4¾d	7380	4.50x5.00	4-Su....	Int...	I...	2	Sep...	Bevel...	St....	Pump...	Fl Pr...	Zenith...	Vacu....	Opt.....	Mag.	No.	No.
Maudslay	4½	174	66	S-34x4¾	S-40x4¾d	7900	5.00x5.00	4-Su....	Int...	I...	2	Sep...	Bevel...	St....	Pump...	Fl Pr...	Zenith...	Vacu....	Opt.....	Mag.	No.	No.
Maudslay	7	174	71	S-34x6	S-40x6d	8510	4.75x6.00	4-Su....	Det...	I...	4	Sep...	Bevel...	St....	Pump...	Fl Pr...	Zenith...	Vacu....	Connor....	Mag.	No.	No.
Pagefield	3½	98	66	S-36x5½	S-36x5½d	6380	4.72x5.50	4-Su....	Int...	L...	2	Sep...	Heli....	St....	Pump...	Pr Cs...	Solex...	Grav....	Watfd....	Mag.	Ex.	No.
Pagefield	5	177	69	S-36x5½	S-42x5½d	7500	5.00x6.00	4-Su....	Int...	L...	2	Sep...	Heli....	St....	Pump...	Pr Cs...	Claudel.	Grav....	Watfd....	Mag.	Ex.	No.
Palladium	3½	176	68	S-36x4¾	S-42x4¾d	6720	4.50x5.50	5-Mn...	Int...	L...	2	Sep...	Heli....	Ci....	Pump...	Sp Pr...	Zenith...	Grav....	B T H....	Mag.	Ex.	No.
Scammell†	12	120	64	S-36x4	S-36x6d	10800	5.00x5.50	4-Su....	Det...	I...	2	Sep...	Heli....	Ci....	Pump...	Pr Cs...	Claudel.	Grav....	Opt.....	Mag.	Ex.	No.
Sheffiec	1½	132	60	S-28x3¼	S-28x3¼d	3800	3.90x4.72	3-Mn...	Int...	L...	2	Sep...	Spur....	St....	Th S....	Splash...	Claudel.	Grav....	Simms....	Mag.	No.	No.
Star	1¼	120	56	P-34x5	P-34x5	2800	3.54x4.72	4-Mn...	Det...	L...	4	Sep...	Heli....	St....	Pump...	Splash...	Zenith...	Grav....	Watfd....	Mag.	Ex.	Ex.
Star	2	138	60	S-34x3	S-34x3d	4030	3.54x5.90	4-Mn...	Int...	L...	2	Sep...	Chain...	No...	Pump...	Pr Cs...	Zenith...	Grav....	Watfd....	Mag.	Ex.	Ex.
Stevens*	2½	156	62	S-34x4	S-40x4d	6500	4.13x5.90	4-Su....	Int...	T...	2	Sep...	Spur....	St....	Pump...	Sp Pr...	Claudel.	Grav....	Simms....	Mag.	Yes	Yes
Straker Squire	2	150	56	S-34x3½	S-34x3½d	3800	3.75x5.00	4-Su....	Int...	L...	4	Sep...	Heli....	Cr....	Th S....	Sp Pr...	Zenith...	Vacu....	Watfd....	Mag.	Ex.	No.
Straker Squire	5	180	72	S-40x5½	S-40x5½d	7980	4.50x6.50	3-Su....	Det...	I...	4	Int...	Chain...	No...	Pump...	Splash...	Zenith...	Vacu....	Watfd....	Mag.	Ex.	No.
Ta'bot	1½	123	62	P-36x6	P-36x7	3470	3.90x5.12	4-Su....	Det...	I...	4	Sep...	Heli....	St....	Pump...	Sp Pr...	Zenith...	Grav....	Opt.....	Mag.	Ex.	No.
Thornycroft	2	144	62	S-36x3½	S-36x3½d	4810	4.00x5.50	4-Su....	Det...	F...	4	Sep...	Heli....	Ci....	Pump...	Pr Cs...	Solex...	Grav....	Simms....	Mag.	Ex.	Ex.
Thornycroft	3	156	67	S-40x4	S-40x4½d	5670	4.50x6.00	3-Su....	Int...	T...	2	Sep...	Heli....	Ci....	Pump...	Pr Cs...	Solex...	Grav....	Simms....	Mag.	Ex.	Ex.
Thornycroft	4–6	186	69	S-40x4¾	S-40x4¾d	7500	4.75x6.00	4-Su....	Det...	F...	4	Sep...	Heli....	Ci....	Pump...	Pr Cs...	Solex...	Grav....	Simms....	Mag.	Ex.	No.
Tilling Stevens	2½	144	57	S-34x4	S-34x4d	4360	4.13x4.92	3-Su....	Int...	L...	2	Sep...	Spur....	St....	Pump...	Splash...	Zenith...	Grav....	Opt.....	Mag.	Ex.	No.
Tilling Stevens*	4	198	68	S-36x4¾	S-36x4¾d	8400	4.50x5.50	4-Su....	Det...	L...	2	Sep...	Chain...	No...	Pump...	Splash...	Zenith...	Grav....	Opt.....	Mag.	Yes	No.
Tilling Stevens*	5	174	68	S-36x4¾	S-36x4¾d	8200	4.75x6.00	4-Su....	Int...	L...	2	Sep...	Chain...	No...	Pump...	Splash...	Zenith...	Grav....	Opt.....	Mag.	Ex.	No.
Tilling Stevens	6	174	68	S-36x5½	S-36x5½d	7700	4.75x6.00	3-Su....	Int...	L...	2	Sep...	Chain...	No...	Pump...	Splash...	Zenith...	Grav....	Opt.....	Mag.	Ex.	No.
Vulcan	1¼	126	56	P-36x5	P-36x5	2780	3.12x5.12	3-Mn...	Det...	L...	4	Sep...	Chain...	No...	Pump...	Sp Pr...	Zenith...	Grav....	M L.....	Mag.	Ex.	Ex.
Vulcan	1½	137	56	S-34x3½	S-34x3½d	3580	3.54x5.12	3-Mn...	Int...	L...	4	Sep...	Heli....	Ci....	Pump...	Sp Pr...	Zenith...	Grav....	M L.....	Mag.	Ex.	Ex.
Vulcan	2	132	56	S-34x4	S-34x4d	3800	3.74x5.12	4-Mn...	Int...	L...	4	Sep...	Heli....	Ci....	Pump...	Pr Cs...	Zenith...	Grav....	M L.....	Mag.	Ex.	Ex.
Watson	4	156	60	S-32x4¾	S-40x4¾d	7160	4.50x5.50	4-Su....	Int...	L...	2	Sep...	Spur....	St....	Pump...	Pr Cs...	Claudel.	Grav....	Simms....	Mag.	No.	No.

ABBREVIATIONS—

*—Gas Electric Transmission
†—Truck Tractor
§—Six Cylinders
Alum—Aluminum
Bat—Battery
Beh E—Behind Engine
B & M—Battery and Magneto
Br—Bronze
C—Central
C—Cushion
Ca—Cam
Ce—Center
Ch—Chain
Ci—Cast Iron
Co—Cone
Dd—Dead
Det—Detachable
DP—Dual Dry Plate
DR—Double Reduction (Bevel and Spur)
Ecc Rods—Triple Eccentric Rods
Eng—Unit with Engine
ERw—External Rear Wheels
ETr—External Transmission
Ex—At Extra Cost
F—In head and side
FF—Full Floating
½ Fl—Semi Floating
Fab—Fabric
FlPl—Reinforced Flitch Plate
FlPr—Pressure to all bearings and wrist pins
GC—Grease Cups
Grav—Gravity
HCS—Hollow Cast Steel
HS—Hollow Pressed Steel
Hell—Helical Gears
I—In head
IFw—Internal Front Wheels
IG—Internal Gearing on Wheels
Int—Integral
IRw—Internal Rear Wheels
ITr—Internal Transmission
L—At side
Lea—Leather
Mag—Magneto
MD—Multi Dry Plate

Chassis Specifications

TRANSMISSION						REAR AXLE					MISCELLANEOUS							MAKE
	Gearset			Universal Joints							Brakes							
Clutch	Location	Number of Forward Speeds	Control Lever Location	Front	Rear	Type	Final Drive	Gear Ratio on Direct	Propulsion Taken By	Torque Taken By	Foot	Hand	Steering Gear Type	Driver's Position	Wheels. Type	Frame Material	Chassis Lubrication	
Co	Se U	4	Ce	Met	Met	F F	Wo	6.75	Sp	Sp	I-Rw	I-Tr	W W	Beh E	Disk	P S	P G	A. E. C.
S P	Se U	4	Ri	Fab	Met	F F	Wo	9.25	Sp	T A	I-Rw	I-Rw	S N	Side E	W C S	Fl Pl	G C	A. E. C.
Co	Se U	4	Ri	Fab	Met	F F	Wo	8.25	Sp	Sp	I-Rw	I-Rw	S N	Beh E	W C S	P S	G C	A. E. C.
Co	Se U	4	Ce	Met	No	F F	Wo	9.33	T T	T T	I-Rw	I-Rw	S N	Beh E	W C S	R S	P G	A. E. C.†
S P	Se U	4	Ri	Met	No	F F	Wo		T T	T T	E-Tr	I-Rw	W W	Beh E	W C S	P S	G C	Albion
S P	Se U	3	Ri	Met	Met	Dd	Ch		R R	T A	E-Tr	I-Rw	W W	Beh E	W C S	R S	G C	Albion
S P	Eng	3	Ce	Met	Met	½ Fl	Sp	5.90	Sp	T T	I-Rw	I-Fw	W W	Beh E	Wire	P S	P G	Austin
S P	Eng	4	Ce	Fab	Met	½ Fl	Sp	5.20	Sp	Sp	I-Rw	E-Tr	W W	Beh E	H S	P S	P G	Austin
S P	Eng	4	Ce	Met	Met	½ Fl	Sp	4.90	Sp	Sp	I-Rw	E-Tr	W W	Beh E	H S	P S	P G	Austin
Co	Se U	4	Ri	Fab	Fab	F F	Wo	6.00	Sp	Sp	I-Rw	I-Rw	W W	Beh E	Disk	P S	G C	Beardmore
Co	Eng	4	Ri	Met	Fab	F F	Sp	4.00	Sp	Sp	I-Rw	I-Rw	W W	Beh E	H S	P S	P G	Belsize
S P	Se U	4	Ce	Fab	Fab	F F	Wo	6.00	Sp	Sp	E-Tr	I-Rw	S N	Side E	H C S	P S	G C	Bristol
S P	Se U	4	Ce	Fab	Fab	F F	Wo	7.60	Sp	Sp	E-Tr	I-Rw	S N	Beh E	H C S	P S	G C	Bristol
Co	Se U	4	Ri			Dd	Ch		R R	R R	E-Tr	I-Rw	S N	Beh E	H C S	R S	G C	Churchill
M O	Eng	3	Ce	Met	Met	½ Fl	Wo	6.50	Sp	Sp	I-Rw	I-Rw	W W	Beh E	H C S	P S	G C	Clyde
Co	Se U	3	Ri			Dd	Ch		Sp	Sp	I-Rw	E-Tr	W S	Beh E	H C S	P S	G C	Clyde
Co	Se U	3	Ri	Met	No	F F	Wo	7.30	T T	T T	E-Tr	I-Rw	W S	Beh E	H C S	P S	G C	Commer
Co	Se U	3	Ce			Dd	Ch	7.50	R R	R R	E-Tr	I-Rw	W S	Beh E	H C S	R S	G C	Commer
Co	Se U	4	Ri			Dd	Ch	9.30	R R	Sp	E-Tr	I-Rw	W S	Beh E	H C S	P S	G C	Commer
Co	Se U	4	Ri	Met	No	F F	Sp	4.00	T T	T T	I-Tr	I-Rw	W W	Beh E	Wire	P S	G C	Crossley
Co	Se U	4	Ri	Met	No	F F	Wo	6.25	T T	T T	E-Tr	I-Rw	W W	Beh E	Wire	P S	O C	Crossley
Co	Se U	4	Ri	Fab	Fab	F F	Wo	4.70	Sp	Sp	E-Tr	I-Rw	W W	Beh E	Disk	P S	G C	Cubitt
Co	Se U	4	Ri	Met	Met	F F	Wo	7.25	Sp	Sp	I-Rw	I-Rw	W W	Beh E	W C S	Fl Pl	G C	Daimler
Co	Eng	3	Ce	Met	No	F F	Wo	6.75	T T	T T	I-Rw	I-Rw	W W	Beh E	Disk	P S	G C	Dennis
Co	Se U	4	Ri	Met	Met	F F	Wo	6.75	Sp	Sp	E-Tr	I-Rw	W S	Beh E	H C S	P S	G C	Dennis
Co	Se U	4	Ri	Met	Met	F F	Wo	7.75	Sp	Sp	E-Tr	I-Rw	W S	Beh E	H C S	P S	G C	Dennis
S P	Eng	3	Ce	Met	Fab	F F	Wo	6.00	Sp	Sp	I-Rw	I-Rw	W W	Beh E	Disk	P S	O C	Guy
Co	Se U	4	Ri	Fab	Fab	F F	D R	6.33	Sp	Sp	I-Tr	I-Rw	W W	Beh E	H C S	R S	O C	Guy
Co	Eng	4	Ri	Fab	Fab	F F	Wo	6.75	Sp	Sp	I-Rw	I-Rw	W W	Beh E	Disk	R S	O C	Guy
D P	Se U	4	Ri	Fab	Fab	½ Fl	Wo	6.5	Sp	Sp	I-Rw	I-Rw	W W	Side E	Disk	P S	G C	Halley
D P	Se U	4	Ri	Fab	Fab	F F	Wo	7.66	Sp	Sp	I-Tr	I-Rw	W W	Side E	H C S	R S	G C	Halley
D P	Se U	4	Ri	Fab	Fab	F F	Wo	5.20	Sp	Sp	I-Tr	I-Rw	W W	Beh E	H C S	R S	G C	Halley
D P	Se U	4	Ri			Dd	Ch		R R	R R	E-Tr	I-Rw	W S	Side E	W C S	R S	G C	Halley
D P	Se U	4	Ri	Fab	Fab	F F	Wo	5.20	Sp	Sp	I-Tr	I-Rw	W W	Beh E	H C S	R S	G C	Halley
Co	Se U	3	Ri			Dd	Ch	6.30	R R	T A	E-Tr	I-Rw	W S	Beh E	W C S	P S	G C	Hallford
Co	Se U	4	Ri			Dd	Ch	7.30	R R	T A	E-Tr	I-Rw	W S	Beh E	W C S	P S	G C	Hallford
Co	Se U	4	Ri			Dd	Ch	8.00	R R	T A	E-Tr	I-Rw	W S	Beh E	W C S	P S	G C	Hallford
M D	Eng	4	Ri	Fab	Fab	F F	Wo	7.20	Sp	Sp	E-Tr	I-Rw	Pl	Beh E	Disk	P S	G C	Karrier
Co	Se U	4	Ri	Met	Met	F F	Wo	7.00	Sp	Sp	E-Tr	I-Rw	W W	Beh E	Alum	P S	G C	Karrier
Co	Se U	4	Ri	Met	Met	F F	Wo	7.00	Sp	Sp	E-Tr	I-Rw	W W	Over E	Disk	P S	G C	Karrier
Co	Se U	4	Ri	Met	Met	F F	D R	8.23	Sp	Sp	E-Tr	I-Rw	W W	Beh E	H C S	P S	G C	Karrier
Co	Se U	4	Ri	Met	Met	F F	D R	8.23	Sp	Sp	E-Tr	I-Rw	W W	Beh E	H C S	P S	G C	Karrier
Co	Se U	4	Ri	Met	Met	F F	D R	8.23	Sp	Sp	E-Tr	I-Rw	W W	Beh E	H C S	P S	G C	Karrier
Co	Se U	4	Ri	Met	No	F F	Wo		T T	T T	I-Rw	I-Rw	W W	Beh E	Disk	P S	P G	Leyland
Co	Se U	4	Ri	Met	No	F F	Wo	7.00	T T	T T	E-Tr	I-Rw	W S	Beh E	H C S	P S	G C	Leyland
Co	Se U	4	Ri	Met	No	F F	D R	7.60	T T	T T	E-Tr	I-Rw	W S	Side E	H C S	P S	G C	Leyland
Co	Se U	4	Ri	Met	No	F F	D R	8.80	T T	T T	E-Tr	I-Rw	W S	Beh E	H C S	P S	G C	Leyland
Co	Se U	4	Ri	Met	No	F F	D R	4.75	T T	T T	E-Tr	I-Rw	W S	Beh E	H C S	P S	G C	Leyland
M O	Se U	4	Ri	Met	No	F F	D R	3.90	T T	T T	E-Tr	I-Rw	W S	Beh E	H C S	P S	G C	Leyland
Co	Se U	4	Ri	Fab	Fab	F F	Wo	6.50	Sp	Sp	I-Rw	I-Rw	Ca	Beh E	Disk	R S	O C	L. V. L.
S P	Se U	4	Ri	Met	Met	½ Fl	Wo	7.00	Sp	Sp	I-Rw	I-Rw	W S	Beh E	Disk	P S	G C	Maudslay
Co	Se U	4	Ri	Met	Met	F F	Wo	7.75	Sp	Sp	E-Tr	I-Rw	W S	Beh E	H C S	R S	G C	Maudslay
Co	Se U	4	Ri	Met	Met	F F	D R	8.25	Sp	Sp	E-Tr	I-Rw	W S	Beh E	H C S	R S	G C	Maudslay
Co	Se U	4	Ce	Met	Met	½ Fl	D R	8.25	Sp	Sp	E-Tr	I-Rw	W S	Side E	H C S	R S	G C	Maudslay
Co	Se U	4	Ri	Met	Met	F F	Wo	6.25	Sp	Sp	E-Tr	E-Rw	W W	Side E	Disk	P S	P G	Pagefield
Co	Se U	4	Ri	Met		F F	D R	7.80	T T	T T	E-Tr	I-Rw	W W	Beh E	W C S	P S	P G	Pagefield
M D	Se U	4	Ri	Met	Met	F F	Wo	7.80	Sp	Sp	E-Tr	I-Rw	W W	Beh E	H C S	P S	G C	Palladium
Co	Se U	3	Ri			Dd	Ch	10.00	R R	R R	E-Tr	I-Rw	W S	Beh E	W C S	P S	O C	Scammell†
Co	Se U	3	Ri	Met	Met	F F	Wo	6.60	Sp	Sp	E-Tr	I-Rw	W S	Beh E	H C S	P S	P G	Sheffiec
S P	Eng	4	Ce	Fab	Fab	½ Fl	Wo	6.20	Sp	Sp	I-Rw	I-Rw	W W	Beh E	Disk	P S	P G	Star
Co	Se U	4	Ri	Met	Met	F F	Wo	5.00	T A	T A	E-Tr	I-Rw	W W	Beh E	Disk	P S	G C	Star
				Met	Met	F F	Wo	6.75	Sp	Sp	E-Tr	I-Rw	W S	Beh E	H C S	P S	G C	Stevens*
Co	Se U	4	Ri	Fab	Fab	F F	Wo	7.20	Sp	Sp	I-Rw	I-Rw	W S	Beh E	W C S	P S	G C	Straker Squire
S P	Se U	4	Ri	Met	Met	F F	Wo	7.00	Sp	Sp	I-Rw	I-Rw	S N	Side E	H C S	P S	G C	Straker Squire
Co	Se U	4	Ce	Met	No	F F	D R		T T	T T	I-Rw	I-Rw	S N	Beh E	Disk	P S	O C	Talbot
Co	Se U	3	Ce	Fab	Fab	F F	Wo	7.25	Sp	Sp	E-Tr	I-Rw	S N	Beh E	W C S	P S	G C	Thornycroft
Co	Se U	4	Ri	Fab	Fab	F F	Wo	7.25	Sp	Sp	E-Tr	I-Rw	S N	Beh E	W C S	P S	G C	Thornycroft
Co	Se U	4	Ri	Fab	Fab	F F	Wo	8.25	Sp	Sp	E-Tr	I-Rw	S N	Side E	W C S	P S	G C	Thornycroft
Co	Se U	4	Ri	Met	Met	F F	Wo	6.00	Sp	Sp	I-Rw	E-Rw	W S	Beh E	H C S	P S	G C	Tilling Stevens
				Met	Met	F F	Wo	10.30	Sp	Sp	E-Rw	I-Rw	W S	Side E	H C S	P S	G C	Tilling Stevens*
Co	Se U	4	Ri	Met	Met	F F	Wo	10.30	Sp	Sp	I-Rw	I-Rw	W S	Beh E	H C S	P S	G C	Tilling Stevens*
				Met	Met	F F	Wo	6.50	Sp	Sp	I-Rw	I-Rw	W S	Beh E	H C S	P S	G C	Tilling Stevens
Co	Se U	4	Op	Met	Met	F F	Wo	6.20	Sp	Sp	E-Tr	I-Rw	W W	Beh E	H S	P S	P G	Vulcan
Co	Se U	4	Op	Met	Met	F F	Wo	6.20	Sp	Sp	E-Tr	I-Rw	W W	Beh E	W C S	P S	P G	Vulcan
Co	Se U	4	Op	Met	Met	F F	Wo	7.70	Sp	Sp	E-Tr	I-Rw	W W	Beh E	W C S	P S	P G	Vulcan
Co	Se U	4	Ri	Met	Met	F F	I G	7.80	R R	T A	E-Tr	I-Rw	W S	Beh E	W C S	R S	G C	Watson

Met—Metallic
Ma—Main Frame
MO—Multi Plate in Oil
NM—Non-Metallic
No—None
OC—Oil Cups
Op—Opposite
Opt—Optional
Over E—Over Engine
P—Pneumatic
PG—Pressure Gun

Pl—Planetary
Pr Cs—Pressure to crankshaft bearings and big ends through hollow crankshaft
PS—Pressed Steel
Ri—On Right
RR—Radius Rods
RS—Rolled Steel
S—Sleeve Type
S—Solid
Sep—Cast Separately

SeU—Separate Unit
Side E—Beside Engine
SN—Screw and Nut
Sp—Springs
Sp—Spiral Bevel
SP—Single Dry Plate
Splash—Pump and Troughs
SpPr—Pressure to main bearings, splash to other parts
Spur—Straight Spur Gear
St—Steel

Su—Sub Frame
T—At both sides
ThS—Thermo Siphon
TT—Torque Tube
TA—Torque Arm
Vacu—Vacuum
Watfd—Watford
WCS—Webbed Cast Steel
Wo—Worm Gearing
WS—Worm and Segment
WW—Worm and Worm Wheel

Continental Gasoline Truck

MAKE AND MODEL	Tons Capacity	GENERAL INFORMATION					ENGINE										
		Wheelbase (Ins.)	Track (Ins.)	TIRES			Bore and Stroke (Ins.)	SUSPENSION		CYLINDERS			Camshaft Drive	Oiling System	Water Circulation	FUEL SYSTEM	
				Type	Size (mm.) Front	Size (mm.) Rear		No. of Points	Main or Subframe	Head	Valve Arrangement	No. Cast in One Block				Carbureter Make	Fuel Feed
FRENCH																	
Ariès	6	161	65	S.	970x160	1000x130d	4-3.93x5.90	4	Su.	Int.	L.	4	Heli.	Press.	ThS.	Solex.	Grav.
Ariès	4	161	56	S.	940x130	1000x130d	4-3.54x5.90	4	Su.	Int.	L.	4	Heli.	Press.	ThS.	Solex.	Grav.
Ariès	1	125	54	P.	835x135	835x135d	4-3.34x5.51	4	Su.	Int.	L.	4	Heli.	Press.	ThS.	Solex.	Grav.
Ariès	½	116	40	P.	730x130	730x130	4-2.36x3.77	3	Su.	Int.	L.	4	Heli.	Press.	ThS.	Solex.	Grav.
Ariès	¼	100	40	P.	715x115	715x115	4-2.36x3.34	3	Su.	Int.	L.	4	Heli.	Press.	ThS.	Solex.	Grav.
Berliet	½	120	56	P.	820x120	820x120	4-3.14x5.11	3	Mn.	Det.	L.	4	Heli.	SpPr.	ThS.	Berliet	Vac.
Berliet	1	126	56	P.	820x120	820x120	4-3.14x5.11	3	Mn.	Det.	L.	4	Heli.	SpPr.	ThS.	Berliet	Vac.
Berliet	1½	134	56	P.	835x135	835x135d	4-3.14x5.11	3	Mn.	Det.	L.	4	Heli.	SpPr.	ThS.	Berliet	Vac.
Berliet	2½	156	66	P.	955x155	955x155d	4-4.33x5.51	4	Mn.	Int.	L.	2	Heli.	SpPr.	Pump.	Berliet	Vac.
Berliet	3½	165	71	P.	1025x185	1025x185d	4.4.33x5.51	4	Mn.	Int.	L.	2	Heli.	SpPr.	Pump.	Berliet	Vac.
Berliet	4	156	66	S.	940x130	1000x130d	4-4.33x5.51	4	Mn.	Int.	L.	2	Heli.	SpPr.	Pump.	Berliet	Grav.
Berliet	6	165	70	S.	950x140	970x200d	4-4.33x5.51	4	Mn.	Int.	L.	2	Heli.	SpPr.	Pump.	Berliet	Grav.
Berliet	Bus.	173	70	P.	955x155	955x155d	4-4.33x5.51	3	Su.	Det.	L.	4	Heli.	SpPr.	Pump.	Berliet	Vac.
*Chenard & Walcker	5	90	56	P.	880x120	880x120d	4-3.14x5.90	4	Su.	Int.	L.	4	Heli.	Press.	ThS.	Solex.	Grav.
*Chenard & Walcker	10	90	55	P.	880x120	880x120d	4-3.14x5.90	4	Su.	Int.	L.	4	Heli.	Press.	ThS.	Solex.	Grav.
Chenard & Walcker	¼	111	47	P.	710x 90	710x 90	4-2.71x3.93	4	Su.	Int.	L.	4	Heli.	Press.	ThS.	Solex.	Grav.
Chenard & Walcker	1½	112	52	P.	765x105	765x105d	4-2.75x5.11	4	Su.	Int.	L.	4	Heli.	Press.	ThS.	Solex.	Grav.
Chenard & Walcker	1¾	135	59	P.	895x135	895x135d	4-3.14x5.90	4	Su.	Int.	L.	4	Heli.	Press.	ThS.	Solex.	Grav.
Citroen	1/5	89	47	P.	650x 80	650x 80	4-2.16x3.54	3	Mn.	Det.	L.	4	Heli.	Press.	ThS.	Solex.	Grav.
Citroen	½	111	47	P.	765x105	765x105	4-2.67x3.93	3	Mn.	Det.	L.	4	Heli.	Press.	ThS.	Solex.	Grav.
Corre-la-Licorne	¼	106	51	P.	710x 90	710x 90	4-2.55x4.12	4	Su.	Det.	L.	4	Heli.	Press.	ThS.	Solex.	Grav.
Corre-la-Licorne	½	113	51	P.	760x 90	760x 90	4-2.63x4.72	4	Su.	Int.	L.	4	Chain.	SpPr.	ThS.	Solex.	Grav.
Corre-la-Licorne	1	127	56	P.	820x120	820x120	4-2.95x5.11	4	Su.	Det.	L.	4	Heli.	Press.	ThS.	Solex.	Grav.
Corre-la-Licorne	2	147	56	P.	820x120	820x120d	4-3.34x5.11	4	Su.	Det.	L.	4	Heli.	Press.	ThS.	Solex.	Grav.
Cottin-Desgouttes	1½	138	59	P.	895x135	895x135d	4-3.14x6.29	4	Mn.	Det.	I.	4	Heli.	Press.	Pump.	Zenith.	Vac.
Cottin-Desgouttes	2	166	59	P.	955x155	955x155d	4-3.54x6.29	4	Mn.	Int.	L.	4	Heli.	Press.	Pump.	Zenith.	Vac.
**Crochat	3	145	65	S.	930x120	1010x120d	4-3.54x5.90	4	Su.	Int.	L.	4	Spur.	Press.	Pump.	Zenith.	Grav.
De Dion Bouton	½	116	51	P.	765x105	765x105	4-2.75x4.72	3	Mn.	Int.	L.	4	Heli.	Press.	ThS.	Solex.	Grav.
De Dion Bouton	2	147	62	P.	895x135	895x135d	4-3.34x5.11	3	Mn.	Int.	L.	4	Heli.	Press.	ThS.	Solex.	Grav.
De Dion Bouton	3	161	65	S.	930x120	930x120d	4-3.93x5.51	3	Mn.	Int.	L.	2	Heli.	Press.	ThS.	Solex.	Grav.
De Dion Bouton	5	169	65	S.	950x140	950x140d	4-3.93x5.90	4	Su.	Int.	L.	2	Heli.	Press.	ThS.	Solex.	Grav.
Delahaye	½	107	51	P.	765x105	765x105	4-2.75x4.72	3	Mn.	Int.	L.	4	Heli.	SpPr.	Pump.	Solex.	Vacu.
Delahaye	1	133	52	P.	835x135	835x135d	4-3.34x5.11	3	Mn.	Int.	L.	4	Heli.	SpPr.	Pump	Solex.	Vacu.
Delahaye	2	143	59	P.	935x135	935x135d	4-3.34x5.11	3	Mn.	Int.	L.	4	Heli.	SpPr.	Pump.	Solex.	Grav.
Delahaye	4	169	64	P.	955x155	955x155d	4-3.93x6.29	4	Mn.	Int.	L.	4	Heli.	SpPr.	Pump.	Claudel.	Grav.
Delahaye	4	158	64	S.	940x130	1000x130d	4-3.93x6.29	4	Mn.	Int.	L.	4	Heli.	SpPr.	Pump.	Claudel.	Grav.
Dehalaye	4	161	66	P.	955x155	955x155d	4-3.93x6.29	4	Mn.	Int.	L.	4	Heli.	SpPr.	Pump.	Claudel.	Grav.
Delahaye	5	165	64	S.	950x140	1030x160d	4-3.93x6.29	4	Mn.	Int.	L.	4	Heli.	SpPr.	Pump.	Claudel.	Grav.
Delaugère-Clayette	1	119	56	P.	820x120	820x120d	4-2.95x4.72	4	Su.	Det.	L.	4	Chain.	Press.	ThS.	Zenith.	Grav.
Delaugère-Clayette	3	155	64	S.	950x140	1000x130d	4-3.93x5.51	4	Su.	Det.	L.	2	Spur.	Press.	ThS.	Zenith.	Grav.
Dewald	10	140	76	S.	900x180	900x200d	4-4.33x5.90	4	Su.	Int.	L.	2	Spur.	Press.	Pump.	Zenith.	Grav.
Laffly	1¾	138	62	P.	820x120	820x120d	4-3.14x5.11	4	Su.	Int.	L.	4	Spur.	SpPr.	Pump.	Zenith.	Grav.
Latil	1½	138	59	P.	955x155	955x155d	4-3.34x5.11	3	Mn.	Int.	L.	4	Spur.	Press.	Pump.	Solex.	Grav.
*Latil	...	78	66	P.	955x155	955x155d	4-4.12x5.51	3	Mn.	Int.	L.	4	Spur.	SpPr.	ThS.	Solex.	Grav.
Latil	5	137	66	S.	1000x140	1000x140d	4-4.12x5.51	3	Mn.	Int.	L.	4	Spur.	SpPr.	ThS.	Solex.	Grav.
Latil	3	121	66	P.	955x155	955x155d	4-4.12x5.51	3	Mn.	Int.	L.	4	Spur.	SpPr.	ThS.	Solex.	Grav.
Mathis	1/5	90	43	P.	700x 80	700x 80	4-2.16x3.14	3	Mn.	Int.	L.	4	Heli.	Splash.	ThS.	Solex.	Grav.
Mathis	¼	108	43	P.	710x 90	710x 90	4-2.36x3.46	3	Mn.	Int.	L.	4	Heli.	Splash.	ThS.	Solex.	Grav.
Mathis	½	111	43	P.	710x 90	710x 90	4-2.36x3.93	3	Mn.	Int.	L.	4	Heli.	Splash.	ThS.	Solex.	Grav.
Panhard	½	106	51	P.	820x120	820x120	4-2.36x4.12	3	Mn.	Det.	Sl.	4	Chain.	Splash.	Pump.	Panhard.	Grav.
Panhard	1	119	54	P.	835x135	835x135	4-2.95x5.11	3	Mn.	Det.	Sl.	4	Chain.	Splash.	Pump.	Panhard.	Grav.
Panhard	1½	142	62	P.	880x120	880x120d	4-2.95x5.11	3	Mn.	Det.	Sl.	4	Chain.	Splash.	Pump.	Panhard.	Grav.
Panhard	2	142	62	P.	895x135	895x135d	4-2.95x5.11	3	Mn.	Det.	Sl.	4	Chain.	SpPr.	Pump.	Panhard.	Grav.
Panhard	3½	162	72	P.	955x155	955x155d	4-3.34x5.51	3	Mn.	Det.	Sl.	4	Chain.	SpPr.	Pump.	Panhard.	Grav.
Panhard	4	162	72	P.	1025x185	1025x185d	4-3.34x5.51	3	Mn.	Det.	Sl.	4	Chain.	SpPr.	Pump.	Panhard.	Grav.
Peugeot	1/6	89	38	P.	650x 65	650x 65	4-1.96x3.34	3	Mn.	Det.	L.	4	Chain.	Splash.	ThS.	Zenith.	Grav.
Peugeot	½	99	47	P.	760x 90	760x 90	4-2.59x4.12	3	Mn.	Int.	L.	4	Chain.	Splash.	ThS.	Zenith.	Grav.
Peugeot	1½	137	59	P.	955x155	955x155d	4-3.34x5.11	4	Su.	Det.	L.	4	Spur.	Press.	Pump.	Zenith.	Grav.
Peugeot	3	153	64	S.	940x130	1000x130d	4-3.93x5.90	4	Su.	Int.	L.	4	Spur.	Press.	Pump.	Zenith.	Grav.
Renault	½	96	45	P.	700x 80	700x 80	4-2.28x3.34	3	Su.	Det.	L.	4	Heli.	SpPr.	ThS.	Renault.	Grav.
Renault	¾	126	56	P.	820x120	820x120	4-2.95x4.72	3	Su.	Int.	L.	4	Heli.	SpPr.	ThS.	Renault.	Grav.
Renault	1½	145	59	P.	835x135	835x135d	4-3.14x5.51	3	Su.	Int.	L.	4	Heli.	SpPr.	ThS.	Renault.	Grav.
Renault	3	160	59	P.	955x155	955x155d	4-3.74x6.29	3	Su.	Int.	L.	4	Heli.	SpPr.	ThS.	Renault.	Grav.
Renault	5	165	68	S.	950x140	1030x160 i	4-3.74x6.29	3	Su.	Int.	L.	4	Heli.	SpPr.	ThS.	Renault.	Grav.
Renault	5	170	68	S.	950x140	1030x160d	4-3.93x6.29	3	Su.	Int.	L.	4	Heli.	SpPr.	ThS.	Renault.	Grav.
Renault	7½	188	72	S.	1030x160	1030x160t	4-4.91x6.29	3	Su.	Int.	L.	2	Heli.	SpPr.	ThS.	Renault.	Grav.
Rochet-Schneider	1½	135	58	P.	880x120	880x120d	4-3.14x5.11	3	Su.	Int.	L.	4	Heli.	Press.	ThS.	Zenith.	Vac.
Rochet-Schneider	2½	163	59	P.	955x155	955x155d	4-3.74x5.51	3	Su.	Int.	L.	4	Heli.	Press.	ThS.	Zenith.	Vac.
Saurer	3	177	64	P.	955x155	955x155d	4-3.93x6.69	3	Mn.	Int.	L.	4	Heli.	SpPr.	Pump.	Saurer.	Grav.
Saurer	3	177	64	P.	1085x185	1085x185d	4-4.33x7.08	3	Mn.	Int.	L.	4	Heli.	SpPr.	Pump.	Saurer.	Grav.
Saurer	5	186	65	S.	1030x160	1030x160t	4-4.33x7.08	3	Mn.	Int.	L.	4	Heli.	SpPr.	Pump.	Saurer.	Grav.
Scemia	3	165	65	P.	955x155	955x155d	4-3.74x5.90	4	Su.	Int.	F.	4	Spur.	Press.	Pump.	Solex.	Grav.
Scemia	5	124	87	S.	900x140	960x160d	4-4.33x5.90	1	Su.	Int.	F.	1	Spur.	Press.	Pump.	Solex.	Grav.
Scemia	7	171	65	S.	900x140	970x180d	4-4.33x5.90	1	Su.	Int.	F.	1	Spur.	Press.	Pump.	Solex.	Grav.
††Somua	...	144	61	P.	955x155	955x155d	4-5.30x6.69	4	Su.	Int.	F.	1	Spur.	Press.	Pump.	Solex.	Grav.
††Somua	...	106	61	P.	955x155	955x155d	4-3.74x5.90	4	Su.	Int.	F.	1	Spur.	Press.	Pump.	Solex.	Grav.
††Somua	...	98	60	P.	895x135	895x135d	4-3.22x5.58	4	Su.	Int.	F.	1	Spur.	Press.	ThS.	Solex.	Grav.
†Unic	...	119	53	P.	765x105	765x105	4-2.75x4.72	3	Mn.	Det.	L.	4	Chain.	Press.	ThS.	Viel.	Grav.
Unic	½	106	53	P.	765x105	765x105	4-2.75x4.72	3	Mn.	Det.	L.	4	Chain.	Press.	ThS.	Viel.	Grav.
Unic	¾	119	52	P.	835x135	835x135	4-2.75x4.72	3	Mn.	Det.	L.	4	Chain.	Press.	ThS.	Viel.	Grav.
Unic	1	123	55	P.	820x120	820x120d	4-3.14x5.11	4	Su.	Int.	L.	4	Chain.	Press.	Pump.	Viel.	Grav.
Unic	1½	139	60	P.	895x135	895x135d	4-3.14x5.11	4	Su.	Int.	L.	4	Chain.	Press.	Pump.	Viel.	Grav.
Vinot-Deguigand	½	119	53	P.	820x120	820x120	4-3.14x5.11	4	Su.	Int.	L.	4	Chain.	SpPr.	Pump.	Solex.	Grav.
Vinot-Deguigand	1½	139	63	P.	895x135	895x135d	4-3.14x5.11	4	Su.	Int.	L.	4	Chain.	SpPr.	Pump.	Solex.	Grav.
Vermorel	½	116	51	P.	765x105	765x105	4-2.75x4.33	4	Mn.	Int.	L.	4	Heli.	Press.	ThS.	Zenith.	Grav.
Vermorel	1	123	55	P.	820x120	820x120d	4-2.75x4.33	4	Mn.	Int.	L.	4	Heli.	Press.	ThS.	Zenith.	Grav.
Zedel	½	114	53	P.	765x195	765x105	4-2.95x4.72	4	Mn.	Det.	L.	4	Heli.	Press.	ThS.	Zenith.	Vac.
ITALIAN																	
Fiat	½	104	49	P.	760x 90	760x 90	4-2.55x4.33	3	Mn.	Det.	L.	4	Spur.	Press.	Pump.	Fiat.	Grav.
Fiat	¾	108	55	P.	765x105	765x105d	4-2.55x4.33	3	Mn.	Det.	L.	4	Spur.	Press.	Pump.	Fiat.	Grav.
Fiat	1½	120	55	P.	820x120	820x120d	4-2.95x5.11	4	Mn.	Det.	L.	4	Spur.	Press.	Pump.	Fiat.	Grav.
Fiat	2	138	59	P.	895x135	895x135d	4-3.74x5.51	4	Mn.	Det.	L.	4	Spur.	Press.	Pump.	Fiat.	Grav.

ABBREVIATIONS:

******—Gas Electric
††—Fire Engine
†—Taxicab
*****—Truck Tractor
Bat—Battery
Bev—Bevel, Pinion and Sector
C—Center
Ch—Chain
Co—Cone
CS—Cast Steel
d—Dual
Det—Detachable
DR—Double Reduction
Eng—Unit with Engine
F—Valves in Head and Side
F & R—Front and Rear Wheels
F & T—Front Wheels and Transmission
Fab—Fabric
GC—Grease Cups
Grav—Gravity
HB—Herringbone Gear
Hel—Helical Gear
IG—Internal Gear
Int—Integral
L—Both Valves at Side
Le—Left
Lea—Leather
Mag—Magneto
MD—Multiple Disc
Met—Metal

Chassis Specifications

ELECTRICAL SYSTEM				TRANSMISSION									RUNNING GEAR				Chassis Lubrication	Wheels Type	MAKE AND MODEL
Ignition System Make	Current Sources	Equipped with Electrical Starter?	Equipped with Electrical Generator?	Clutch Type	GEARSET			UNIVERSAL JOINTS		REAR AXLE			BRAKES		STEERING GEAR				
					Location	No. of Forward Speeds	Position of Gear-Shift Lever	Front	Rear	Final Drive	Propulsion Taken By	Torque Taken By	Foot Location	Hand Location	Type	Location			
FRENCH																			
Opt	Mag	No	No	MD	SeU	4	Ri	Met	Met	Ch	RR	Sp	Tr	R	WS	Ri	GC	CS	Ariès
Opt	Mag	No	No	MD	SeU	4	Ri	Met	Met	Ch	RR	Sp	Tr	R	WS	Ri	GC	CS	Ariès
Opt	Mag	No	No	MD	SeU	4	Ri	Met	Met	ST	Sp	TT	Tr	R	WS	Ri	GC	Disk	Ariès
Opt	Mag	Yes	Yes	MD	SeU	3	Ri	Fab	Fab	ST	Sp	TT	R	T	WS	Le	GC	Disk	Ariès
Opt	Mag	Yes	Yes	MD	SeU	3	Ri	Fab	Fab	ST	Sp	TT	R	IRw	WS	Le	GC	Disk	Ariès
SEV	Mag	Yes	Yes	MD	Eng	3	C	Met	Met	Sp	Sp	Sp	Tr	R	WS	Ri	PG	Disk	Berliet
SEV	Mag	Yes	Yes	MD	Eng	4	C	Met	Met	Sp	Sp	Sp	Tr	R	WS	Ri	PG	Disk	Berliet
SEV	Mag	Yes	Yes	MD	Eng	4	C	Met	Met	Wo	Sp	Sp	Tr	R	WS	Ri	PG	Disk	Berliet
SEV	Mag	Yes	Yes	MD	SeU	4	C	Met	Met	DR	Sp	Sp	F&T	R	SN	Ri	PG	Disk	Berliet
SEV	Mag	Opt	Opt	MD	SeU	4	C	Met	Met	Wo	Sp	Sp	Tr	R	SN	Ri	PG	Disk	Berliet
SEV	Mag	No	No	MD	SeU	4	C	Met	Met	Ch	Sp	RR	Tr	R	SN	Ri	PG	CS	Berliet
SEV	Mag	No	No	MD	SeU	4	C	Met	Met	Wo	Sp	RR	Tr	R	SN	Ri	PG	CS	Berliet
SEV	Mag	Yes	Yes	MD	Eng	4	C	Fab	Met	DR	TT	TT	F&R	R	SN	Ri	PG	Disk	Berliet
SEV	Mag	No	No	Co	SeU	4	Ri	Met	Met	IG	Sp	TT	Tr	R	WS	Ri	GC	Disk	*Chenard & Walcker
SEV	Mag	No	No	Co	SeU	8	Ri	Met	Met	IG	Sp	TT	Tr	R	WS	Ri	GC	Disk	*Chenard & Walcker
SEV	Mag	Opt	Opt	Co	SeU	3	Ri	Met	Met	IG	Sp	TT	Tr	R	WS	Ri	PG	Disk	Chenard & Walcker
SEV	Mag	Opt	Opt	Co	SeU	4	Ri	Met	Met	IG	Sp	TT	Tr	R	WS	Ri	PG	Disk	Chenard & Walcker
SEV	Mag	Opt	Opt	Co	SeU	4	Ri	Met	Met	IG	Sp	TT	Tr	R	WS	Ri	PG	Disk	Chenard & Walcker
RB	Mag	Yes	Yes	SP	Eng	3	C	Fab	Fab	HB	Sp	Sp	Tr	R	WW	Le	PG	Disk	Citroen
RB	Mag	Yes	Yes	SP	Eng	3	C	Fab	Fab	HB	Sp	Sp	Tr	R	WW	Le	PG	Disk	Citroen
Salmoon	Mag	Opt	Opt	Co	Eng	4	Ri	Met	Met	Sp	Sp	Sp	R	R	WS	Ri	PG	Disk	Corre-la-Licorne
Salmoon	Mag	Opt	Opt	Co	SeU	4	Ri	Met	Met	Sp	Sp	Sp	R	R	WS	Ri	PG	Disk	Corre-la-Licorne
Salmoon	Mag	Opt	Opt	Co	SeU	4	Ri	Met	Met	Sp	Sp	Sp	R	R	WS	Ri	PG	Disk	Corre-la-Licorne
Salmoon	Mag	Opt	Opt	Co	SeU	4	Ri	Met	Met	ST	Sp	Sp	Tr	R	WS	Ri	PG	Disk	Corre-la-Licorne
Zenith	Mag	Opt	Opt	Co	Eng	4	Ri	Met	Met	DR	TT	TT	F&T	Rw	SN	Ri	GC	Disk	Cottin-Desgouttes
Zenith	Mag	Opt	Opt	Co	Eng	4	Ri	Met	Met	DR	SP	SP	F&T	Rw	SN	Ri	GC	Disk	Cottin-Desgouttes
	Mag	Yes	Yes	None	SeU	4	Ri	Met	Met	Ch	RR	SP	Tr	Rw	WS	Ri	GC	CS	**Crochat
Victrix	Mag	Yes	Yes	SP	Eng	4	Ri	Met	Met	Sp	TT	TT	Tr	Rw	WS	Ri	GC	Disk	De Dion Bouton
Victrix	Mag	Yes	Yes	SP	Eng	4	Ri	Met	Met	Sp	TT	TT	Tr	Rw	WS	Ri	GC	Disk	De Dion Bouton
Victrix	Mag	No	No	SP	SeU	4	Ri	Met	Met	IG	SP	SP	Tr	Rw	WS	Ri	GC	CS	De Dion Bouton
Victrix	Mag	No	No	SP	SeU	4	Ri	Met	Met	IG	SP	SP	Tr	Rw	WS	Ri	GC	CS	De Dion Bouton
Opt	Mag	Opt	Opt	SP	Eng	4	C	Lea	ST	ST	SP	SP	Tr	Rw	WS	Le	PG	Wood	Delahaye
Opt	Mag	Opt	Opt	SP	Eng	4	Ri	Met	Met	ST	SP	SP	Tr	Rw	WS	Ri	PG	Disk	Delahaye
Opt	Mag	Opt	Opt	Co	Eng	4	Ri	Met	Met	ST	SP	SP	Tr	Rw	WS	Ri	PG	Disk	Delahaye
Opt	Mag	Opt	Opt	Co	Eng	4	Ri	Met	Met	ST	SP	SP	Tr	Rw	WS	Ri	PG	Disk	Delahaye
Opt	Mag	Opt	Opt	Co	SeU	4	Ri	Met	Met	Ch	RR	SP	Tr	Rw	WS	Ri	PG	Wood	Delahaye
Lumiere	Mag	Opt	Opt	Co	Eng	4	Ri	Met	Met	ST	SP	TT	Tr	Rw	WS	Ri	PG	Wood	Delahaye
Opt	Mag	Opt	Opt	Co	SeU	4	Ri	Met	Met	Ch	RR	SP	Tr	Rw	WS	Ri	PG	Wood	Delahaye
Opt	Mag	No	Yes	Co	SeU	4	Ri	Met	Met	Sp	SP	SP	Tr	Rw	WS	Ri	PG	Disk	Delaugère-Clayette
Opt	Mag	No	Yes	Co	SeU	4	Ri	Met	Met	Ch	SP	SP	Tr	Rw	WS	Ri	PG	Disk	Delaugère-Clayette
Opt	Mag	No	Yes	Co	SeU	4	Ri	Met	Met	Ch	RR	SP	Tr	Rw	WS	Ri	PG	Wood	Dewald
Opt	Mag	No	No	Co	SeU	4	Ri	Met	Met	ST	SP	SP	Tr	Rw	WS	Ri	GC	Disk	Laffly
Opt	Mag	Yes	Yes	SP	Eng	4	C	Met	Met	ST	SP	SP	Tr	Rw	WS	Ri	GC	Disk	Latil
Opt	Mag	No	No	Co	Eng	4	Ri	Met	Met	IG	SP	SP	Tr	Rw	SN	Ri	GC	CS	*Latil
Opt	Mag	No	No	Co	Eng	4	Ri	Met	Met	IG	SP	SP	F&T	Rw	SN	Ri	GC	CS	Latil
Opt	Mag	No	No	Co	Eng	4	C	Met	Met	IG	SP	SP	F&T	Rw	SN	Le	GC	Disk	Latil
Opt	Mag	Yes	Yes	MD	Eng	4	Ri	Met	Met	ST	SP	SP	Rw	Rw	WS	Ri	PG	Disk	Mathis
Opt	Mag	Yes	Yes	MD	Eng	4	Ri	Met	Met	ST	SP	SP	Rw	Rw	WS	Ri	PG	Disk	Mathis
Opt	Mag	Yes	Yes	MD	Eng	4	Ri	Met	Met	ST	SP	SP	Rw	Rw	WS	Ri	PG	Disk	Mathis
SEV	Mag	Opt	Opt	Co	Eng	4	Ri	Fab	None	Sp	TT	TT	Rw	Rw	SN	Ri	GC	Wood	Panhard
SEV	Mag	Opt	Opt	MD	Eng	4	Ri	Met	None	Sp	TT	TT	Rw	Rw	SN	Ri	GC	Wood	Panhard
SEV	Mag	Opt	Opt	MD	Eng	4	Ri	Met	None	Sp	TT	TT	Rw	Rw	SN	Ri	GC	Wood	Panhard
SEV	Mag	Opt	Opt	MD	Eng	4	Ri	Met	None	Sp	TT	TT	Rw	Rw	SN	Ri	GC	Wood	Panhard
SEV	Mag	Opt	Opt	MD	Eng	4	Ri	Met	None	Sp	TT	TT	F&R	Rw	SN	Ri	GC	Disk	Panhard
SEV	Mag	Opt	Opt	MD	Eng	4	Ri	Met	None	Sp	TT	TT	F&R	Rw	SN	Ri	GC	Disk	Panhard
SEV	Mag	No	No	SP	Eng	3	C	Met	None	Wo	SP	TT	Rw	Rw	Bev	Ri	PG	Wire	Peugeot
SEV	Mag	Yes	Yes	MD	Eng	4	C	Met	Met	Wo	SP	TT	Rw	Rw	SN	Le	PG	Wood	Peugeot
SEV	Mag	Opt	Opt	SP	Eng	4	C	Met	Met	IG	SP	TT	Rw	Rw	SN	Le	PG	Disk	Peugeot
SEV	Mag	No	No	Co	SeU	4	Ri	Met	Met	Wo	SP	RR	Rw	Rw	WS	Ri	GC	CS	Peugeot
SEV	Mag	Yes	Yes	Co	TT	3	Ri	Met	None	Sp	TT	TT	Rw	Rw	WS	Le	GC	Disk	Renault
SEV	Mag	Yes	Yes	Co	TT	3	Ri	Met	None	DR	TT	TT	Rw	Rw	WS	Le	GC	Disk	Renault
SEV	Mag	Yes	Yes	Co	TT	4	Ri	Met	Met	DR	TT	TT	Tr	Rw	WS	Ri	GC	Disk	Renault
SEV	Mag	Yes	Yes	Co	SeU	4	Ri	Met	Met	DR	Sp	TT	Tr	Rw	WS	Ri	GC	Disk	Renault
SEV	Mag	No	No	Co	SeU	4	Ri	Met	Met	IG	Sp	TT	Tr	Rw	WS	Ri	GC	CS	Renault
SEV	Mag	No	No	Co	SeU	4	Ri	Met	Met	IG	Sp	TT	Tr	Rw	WS	Ri	GC	CS	Renault
SEV	Mag	No	No	Co	SeU	4	Ri	Met	Met	IG	Sp	TT	Tr	Rw	WS	Ri	GC	CS	Renault
Zenith	Mag	Opt	Opt	Co	Eng	4	C	Met	Met	DR	Sp	TT	Tr	Rw	WS	Ri	GC	Disk	Rochet-Schneider
Zenith	Mag	Opt	Opt	Co	Eng	4	C	Met	Met	DR	Sp	TT	F&R	Rw	WS	Ri	GC	Disk	Rochet-Schneider
Opt	Mag	Opt	Yes	Co	Eng	4	Ri	Met	Met	ST	Sp	Sp	F&R	Rw	SN	Ri	PG	Wood	Saurer
Opt	Mag	Opt	Yes	Co	Eng	4	Ri	Met	Met	ST	Sp	Sp	F&R	Rw	SN	Ri	PG	Wood	Saurer
Opt	Mag	Opt	Yes	Co	Eng	4	Ri	Met	Met	ST	Sp	Sp	Rw	Rw	SN	Ri	PG	Wood	Saurer
Delco	Bat	Yes	Yes	SP	SeU	4	Ri	Met	Met	IG	Sp	Sp	Tr	Rw	WS	Ri	PG	Disk	Scemia
Opt	Mag	No	No	MD	SeU	3	Ri	Met	Met	IG	Sp	Sp	Tr	Rw	WS	Ri	PG	CS	Scemia
Opt	Mag	No	No	MD	SeU	3	Ri	Met	Met	IG	Sp	Sp	Tr	Rw	WS	Ri	PG	CS	Scemia
Opt	Bat	Opt	Opt	SP	SeU	4	Ri	Met	Met	IG	Sp	Sp	F&T	Rw	WS	Ri	GC	Disk	††Somua
Opt	Mag	Opt	Opt	SP	SeU	4	Ri	Met	Met	IG	Sp	Sp	F&T	Rw	WS	Ri	GC	Disk	††Somua
Opt	Mag	Opt	Opt	Co	SeU	4	Ri	Met	Met	IG	Sp	Sp	Tr	Rw	WS	Ri	GC	Disk	††Somua
Opt	Mag	Yes	Yes	MD	Eng	4	C	Met	Met	Sp	Sp	Sp	F&T	Rw	WS	Le	PG	Disk	†Unic
Opt	Mag	Yes	Yes	MD	Eng	4	C	Met	Met	Sp	Sp	Sp	F&T	Rw	WS	Le	PG	Disk	Unic
Opt	Mag	Yes	Yes	MD	Eng	4	C	Met	Met	Sp	Sp	Sp	F&T	Rw	WS	Le	PG	Disk	Unic
Opt	Mag	Yes	Yes	Co	SeU	4	Ri	Met	Met	Sp	Sp	Sp	Rw	Rw	WS	Ri	PG	Disk	Unic
Opt	Mag	Yes	Yes	Co	SeU	4	Ri	Met	Met	Sp	Sp	Sp	Rw	Rw	WS	Ri	PG	Disk	Unic
Opt	Mag		Yes	Co	SeU	4	Ri	Met	Met	ST	Sp	Sp	Tr	Rw	WS	Ri	GC	Disk	Vinot-Deguigand
Opt	Mag		Yes	Co	SeU	4	Ri	Met	Met	DR	Sp	Sp	Tr	Rw	WS	Ri	GC	Disk	Vinot-Deguigand
Opt	Mag	Yes	Yes	Co	Eng	4	Ri	Met	Met	ST	Sp	Sp	Tr	Rw	WS	Ri	GC	Wood	Vermorel
Opt	Mag	Yes	Yes	Co	Eng	4	Ri	Met	Met	ST	Sp	Sp	Tr	Rw	WS	Ri	GC	Disk	Vermore
SAGA	Mag	Yes	Yes	SP	Eng	4	Ri	Fab	Met	Sp	Sp	Sp	Tr	Rw	WS	Ri	PG	Disk	Zedel
ITALIAN																			
Marelli	Mag	Yes	Yes	MD	Eng	4	Ri	Met	None	Sp	SP	TT	Rw	Rw	WW	Ri	PG	Disk	Fiat
Marelli	Mag	Yes	Yes	MD	Eng	4	Ri	Met	None	Wo	SP	TT	Rw	Rw	WW	Ri	PG	Disk	Fiat
Marelli	Mag	Yes	Yes	MD	Eng	4	Ri	Met	None	Sp	SP	TT	Rw	Rw	WW	Ri	PG	Disk	Fiat
Marelli	Mag	Yes	Yes	MD	Eng	4	Ri	Fab	Fab	Wo	SP	TT	Rw	Rw	WW	Ri	PG	Disk	Fiat

Mn—Main Frame
Opt—Optional
P—Pneumatic
PG—Pressure Gun
Press—Hollow Crankshaft. Pressure to all crankshaft and connecting rod bearings.
Ri—Right
RR—Radius Rods
Rw—Rear Wheels
S—Solid
SeU—Separate Unit
SN—Screw and Nut
Sl—Sleeve Type
SlP—Single Plate
Sp—Spiral Bevel
SP—Springs
SpPr—Pressure to main crankshaft bearings only. Splash to connecting rods and other parts.
Spur—Spur Gear
ST—Straight Bevel
Su—Sub Frame
t—Triple
ThS—Thermo Siphon
Tt—Unit with torque tube
TT—Torque Tube
Tr—Transmission
Vac—Vacuum
Wo—Worm
WS—Worm and Screw
WW—Worm and Wheel

Continental Gasoline Truck

MAKE & MODEL	Tons Capacity	GENERAL: Wheelbase (Ins.)	Truck (Ins.)	Tires: Type & Front Size (Ins.)	Tires: Type & Rear Size (Ins.)	Chassis Weight (Lbs.)	ENGINE: Bore & Stroke (Ins.)	Rated H.P.	R.P.M.	Number & Type of Main Crankshaft Bearings	Cylinder Head	Valve Arrangement	Number of Cylinders Cast in One Piece	Piston Material	Camshaft Drive	Oiling System	Water Circulation	Fuel System: Carbureter Make	Fuel Feed
GERMAN																			
Adler L3D	3.3	161	61½	S-36½x4¾	S-39¾x4¾d	6610	4½x6½	45	1200	4-Plain	Int	L	2	CI	Spur	SpPr	Pump	Pallas	Grav
Adler L5A	5.5	177	68½	S-36½x5½	S-40½x5½d	7716	4½x6½	45	1200	4-Plain	Int	L	2	CI	Spur	SplPr	Pump	Pallas	Grav
Adler L2	2.2	142	55⅛	S-36¼x4	S-36¼x4¾d	3306	3⅝x5⅝	30	1200	4-Plain	Int	L	2	Al	Spur	SpPr	Pump	Pallas	Vacu
Benz 1CN	1.6	148	59⅛	P-35¼x5⅝	P-35¼x5⅝d	3800	3⅝x5⅝	34	1200	3-Plain	Int	L	4	Al	Heli	PrCs	Pump	Zenith	Pres
Benz 2CN	2.7	158	60⅝	S 36¼x4	S-36½x4¾d	5100	4½x6½	45	1000	3-Plain	Int	L	2	Al	Heli	PrCs	Pump	Zenith	Pres
Benz 3CN	3.85	165	60⅛	S-36½x4¾	S-36½x5½d	5950	4½x6½	45	1000	3-Plain	Int	L	2	Al	Heli	PrCs	Pump	Zenith	Pres
Benz 5K3	4.4	168	68	S-36½x5½	S-38¼x6¼d	7050	4¾x7⅛	55	1000	3-Plain	Int	L	2	Al	Heli	PrCs	Pump	Zenith	Pres
Benz	4.4	168	68	S-36½x5½	S-38¼x6¼d	.....	.....	55	600	.....	.....	D	.....	.....	.....	.....	.....	.....	.....
Buessing IIIG	3.85	174	61⅜	S-36½x4¾	S-40½x5½d	6000	4½x5⅝	40	850	3-Plain	Det	I	2	CI	Spur	PrCs	Pump	Own	Grav
Buessing IIIGL	30*	174	61	P-38 x7	P-42 x9	4500	4½x5⅝	45	850	3-Plain	Det	I	2	CI	Spur	PrCs	Pump	Own	Grav
Buessing Six-Wheel	50*	Opt	68/59	P-40 x8	P-40 x8	.....	6-4⅝x6⅝	...	850	.....	Det	I	2	CI	Spur	PrCs	Pump	Own	Grav
Buessing Six-Wheel	5.5	Opt	68/59	S-40½x5½	S-40½x5½	.....	4⅝x6⅝	55	850	3-Plain	Det	I	2	CI	Spur	PrCs	Pump	Own	Grav
Buessing Z	6.05	180	64	S-40½x5½	S-40½x5½d	6700	4⅝x6⅝	55	850	3-Plain	Det	I	2	CI	Spur	PrCs	Pump	Own	Grav
Daag EC3	3.3	164	59⅞	S-36⅝x4¾	S-40½x5½d	6834	4¾x6¼	42	1000	3-Ball	Int	L	2	CI	Spur	PrCs	Pump	Pallas	Pres
Daag EK45	4.4	180	65¾	S-36⅝x5½	S-40½x6¼d	7495	4⅝x6¼	52	1000	3-Ball	Int	L	2	Al	Spur	PrCs	Pump	Pallas	Vacu
Daag AC2	26*	168	59⅞	P-36½x6	P-42¼x8⅞	4409	4⅜x6¼	55	1200	3-Roller	Det	I	4	Al	Heli	PrCs	Pump	Pallas	Vacu
Daag NK5	5.5	178	65	S-34½x6	S-39⅝x6⅝d	7054	4⅜x6¼	60	1200	3-Roller	Det	I	4	Al	Heli	PrCs	Pump	Pallas	Vacu
Daimler DC2c	26*	152	60¼	P-36⅝x6	P-40 x8	5000	4½x5⅝	40	1000	4-Plain	Int	I	2	Al	Bevel	PrCs	Pump	Own	Pres
Daimler DC3c	3.8	158	58⅜	S-36⅝x4¾	S-36⅝x5½d	6450	4¼x5⅝	40	1000	4-Plain	Int	I	2	Al	Spur	PrCs	Pump	Own	Pres
Daimler DR4-5d	4.9	174	61	S-36⅝x5½	S-41⅜x6¼d	8050	4¾x6⅝	45	880	4-Plain	Int	I	2	Al	Spur	PrCs	Pump	Own	Pres
Daimler DC3do	4.4	171	59⅛	S-36⅝x4¾	S-40½x5½d	.....	4¾x6⅝	45	880	4-Plain	Int	I	2	Al	Spur	PrCs	Pump	Own	Pres
Daimler DCIa	1.1	134	55⅛	P-34 x5	P-38 x7	.....	3⅝x5½	35	1600	3-Plain	Int	I	4	Al	Spur	PrCs	Pump	Own	Pres
Dinos 16-35	2.2	145	61¼	S-36¼x4	S-36⅝x4⅜d	6172	3¾x5⅛	35	1500	4-Plain	Int	F	2	CI	Chain	FlPr	Pump	Pallas	Pres
Dixi 2	2.2	150	61¼	S-36⅝x4¾	S-36⅝x4¾d	5070	3¾x6½	35	1150	3-Plain	Int	F	2	CI	Spur	SpPr	Pump	Opt	Grav
Dixi 3	3.3	157	60¼	S-36⅝x4¾	S-40½x5½d	6200	4½x6½	45	1150	3-Plain	Int	L	2	CI	Spur	SpPr	Pump	Opt	Grav
Dixi 4/5	4.4	172	63	S-36⅝x4¾	S-40½x5½d	6610	4¾x7⅛	55	900	3-Plain	Int	L	2	CI	Spur	SpPr	Pump	Opt	Grav
Duerkopp 4/5	5.5	175	64⅝	S-36⅝x5½	S-41⅜x6¼d	8810	5½x6¼	55	1000	3-Plain	Int	L	2	Al	Heli	PrCs	Pump	Opt	Vacu
Duerkopp 1.5	1.6	142	55⅛	S-33⅞x4	S-33⅞x4d	3747	3⅝x5½	30	1400	3-Plain	Int	L	4	Al	Heli	PrCs	Pump	Opt	Vacu
Elite-Wagen ALZ5	5.5	170	67	S-36⅝x5½	S-40½x5½d	7054	5¼x5⅝	55	900	3-Plain	Int	F	2	CI	Heli	SpPr	Pump	Pallas	Pres
Elite-Wagen BLIV	2.7	152	60	S-34¼x4⅜	S-34¼x4⅜d	5511	4½x5⅜	45	1100	3-Plain	Int	L	2	CI	Spur	SpPr	Pump	Pallas	Pres
Elite Wagen Ca1.5	1.6	138	60	S-34¼x4	S-34¼x4d	4188	3⅝x5⅛	35	1100	3-Plain	Int	L	2	CI	Spur	SpPr	Pump	Pallas	Pres
Faun B	2.2	147	61	S-36⅝x4¾	S-36⅝x4¾d	5291	4¾x5⅝	42	1000	3-Plain	Int	L	4	CI	Spur	PrCs	Pump	Solex	Vacu
Faun S	3.3	160	61	S-36⅝x4¾	S-36⅝x4¾d	5952	4¾x5⅝	42	1000	3-Plain	Int	L	4	CI	Spur	PrCs	Pump	Solex	Vacu
F.M.A. LIA	5.5	161	61½	S-36⅝x4¾	S-40½x4¾d	9000	5½x5⅝	50	900	3-Plain	Int	T	2	CI	Spur	FlPr	Pump	Pallas	Pres
Hansa-Lloyd L1.5	1.6	138	55⅛	S-34 x4	S-34 x4d	4400	3⅝x5½	30	1200	3-Plain	Int	L	4	Al	Chain	SpPr	ThS	Pallas	Vacu
Hercules B	1.6	142	54	S-33⅞x3½	S-33⅞x4¾d	3527	3⅜x5½	28	1400	3-Plain	Int	L	4	Al	Spur	FlPr	Pump	Pallas	Grav
Hercules G	2.7	154	61¼	S-36¼x4⅜	S-36¼x4⅜d	4629	4⅝x5⅝	36	1000	3-Plain	Int	L	2	CI	Spur	FlPr	Pump	Solex	Grav
Hercules DN	3.3	161	61½	S-36⅝x4¾	S-39¾x4¾d	5732	4⅝x5⅝	42	900	3-Plain	Int	L	2	CI	Spur	FlPr	Pump	Solex	Grav
Hercules E4	4.4	161	61¼	S-36⅝x4¾	S-39¾x4¾d	6172	4⅝x5⅝	42	900	3-Plain	Int	L	2	CI	Spur	FlPr	Pump	Zenith	Grav
Hille K3	3.3	160	60	S-36⅝x4¾	S-40½x5½d	6400	4½x6⅜	45	1000	3-Plain	Det	I	4	CI	Heli	PrCs	Pump	Meco	Vacu
Hille S5	5.5	173	61	S-33 x5½	S-41⅜x6¼d	8376	5½x6⅜	50	900	3-Plain	Int	F	2	CI	Chain	PrCs	Pump	Meco	Pres
Horch IT	1.1	136	55⅛	P-37 x5⅜	P-37 x5⅜	2425	3½x5½	30	1800	3-Plain	Int	L	4	Al	Chain	PrCs	Pump	Solex	Vacu
Komnick 3W1	3.3	166	61¼	S-36⅝x4¾	S-40½x5½d	7500	4⅝x6⅛	45	1000	3-Plain	Det	I	4	CI	Heli	PrCs	Pump	Pallas	Vacu
Komnick 5L3	5.5	174	63½	S-36⅝x5½	S-41⅜x6¼d	7936	4⅝x6½	45	1000	3-Plain	Det	I	4	CI	Heli	PrCs	Pump	Pallas	Vacu
Krupp L5	5.5	174	65	S-36⅝x5½	S-38¼x6¼d	6834	4¾x6⅝	45	1000	3-Plain	Int	L	2	Al	Heli	SpPr	Pump	Pallas	Grav
Lippische Werke	3.3	123	63	S-35½x4	S-35½x4	4188	2⅝x5½	27	1600	2-Roller	Det	I	4	Al	Heli	SpPr	Pump	Pallas	Grav
Magirus 1C	1.65	134	59	P-34 x5	P-38 x7	3600	3¾x5⅝	34	1200	3-Plain	Int	L	4	CI	Spur	PrCs	Pump	Pallas	Vacu
Magirus 2C1	18*	177	60	P-36 x6	P-42 x9	5550	4⅝x6⅝	40	1100	3-Plain	Int	L	2	CI	Spur	PrCs	Pump	Pallas	Va
Magirus 3C1S	3.3	163	63¾	S-36⅝x5½	S-36⅝x5½d	6500	5⅝x7⅛	70	1100	3-Plain	Int	L	2	CI	Spur	PrCs	Pump	Pallas	V
M.A.N. C2T	2.75	152	61	S-36¼x4	S-36⅝x4¾d	4700	4⅞x6⅝	40	1000	3-Ball	Int	T	2	Al	Spur	SpPr	Pump	Pallas	V
M.A.N. Bus	26*	152	61	P-36 x6	P-40 x8	4700	4⅞x6⅝	40	1000	3-Ball	Int	T	2	Al	Spur	SpPr	Pump	Pallas	V
M.A.N. 3T	3.3	166	60½	S-36⅝x4¾	S-40½x5½d	5600	4¾x7⅛	50	1000	3-Ball	Int	T	2	Al	Spur	SpPr	Pump	Pallas	Vacu
M.A.N. 4-5T	5.5	185	65½	S-32¾x4¾	S-41⅜x6¼d	6650	4¾x7⅛	50	1000	3-Ball	Int	T	2	Al	Spur	SpPr	Pump	Pallas	Vacu
Mannesmann-Mulag 56C	5.5	168	68	S-36⅝x5½	S-41⅜x6¼d	8377	5½x5⅝	57	900	3-Plain	Int	T	2	CI	Spur	SpPr	Pump	Zenith	Grav
Mannesmann-Mulag 57Z	3.3	154	65¾	S-36⅝x4¾	S-39¾x4¾d	7275	4⅝x5⅝	53	900	3-Plain	Int	T	2	CI	Spur	SpPr	Pump	Zenith	Grav
Mannesmann Mulag LC	3.3	160	60	S-36⅝x4¾	S-40½x5½d	7716	4⅝x5⅝	53	900	3-Plain	Int	T	2	CI	Spur	SpPr	Pump	Zenith	Grav
Nacke 2T	2.2	150	63	S-36¼x4	S-36¼x4d	4400	3⅝x5⅝	32	1200	3-Plain	Int	F	2	CI	Spur	PrCs	Pump	Opt	Pres
Nacke 3T	3.3	157	63	S-36⅝x4¾	S-39¾x4¾d	6613	4¼x4¾	38	1000	3-Plain	Int	F	2	CI	Spur	PrCs	Pump	Opt	Pres
Nacke 5T	5.5	170	63	S-36⅝x4¾	S-40½x5½d	7275	4¾x6⅝	44	1000	3-Plain	Int	F	2	CI	Spur	PrCs	Pump	Opt	Pres
N.A.G. KL8	4.4	166	60½	P-38 x7	P-38 x7d	6613	4¾x6⅝	42	900	3-Plain	Int	I	2	CI	Spur	PrCs	Pump	Pallas	Pres
N.A.G. L8	5.5	177	65	P-38 x7	P-38 x7d	7936	4¾x6⅝	42	900	3-Plain	Int	I	2	CI	Spur	PrCs	Pump	Pallas	Pres
N.A.G. KO8	26*	177	66	P-38 x7	P-42 x9	7716	4¾x6⅝	42	900	3-Plain	Int	I	2	CI	Spur	PrCs	Pump	Pallas	Pres
N.A.G. KO	32*	180	66	P-38 x7	P-42 x9	7936	6-4¾x6⅝	42	900	4-Plain	Int	I	2	CI	Spur	PrCs	Pump	Pallas	Pres
N.S.U. 2.5T	2.7	150	59⅛	S-34 x3¾	S-36⅝x4¾d	3850	3⅛x5½	40	1600	3-Plain	Int	L	2	CI	Spur	FlPr	ThS	Zenith	Pres
Opel 3.5T	3.8	166	60	S-36⅝x4¾	S-40½x5½d	7100	4⅝x5 11/16	40	900	3-Plain	Int	L	2	CI	Heli	PrCs	Pump	Own	Pres
Stoewer 1T	1.6	138	55	P-33½x4¾	P-33½x4¾	1980	3½x4¾	28	1800	3-Plain	Int	L	4	CI	Chain	SpPr	Pump	Zenith	Vacu
Stoewer 3T	3.3	162	60	S-36⅝x4¾	S-40½x5½d	.....	4⅝x5⅝	36	1100	3-Plain	Int	L	4	CI	Spur	SpPr	Pump	Zenith	Vacu
Vomag P2(f	2.7	142	61	P-36 x6	P-36 x6d	5291	4⅝x6⅝	40	1000	3-Plain	Int	L	2	CI	Spur	PrCs	Pump	Pallas	Grav
Vomag P30z	3.8	160	63	P-38 x7	P-38 x7d	5952	4⅝x7⅛	45	1000	3-Plain	Int	L	2	CI	Spur	PrCs	Pump	Pallas	Grav
Vomag P45zk	3.8	166	66	S-36⅝x4¾	S-40½x5½d	6393	4⅝x6⅝	40	1000	3-Plain	Int	L	2	CI	Spur	PrCs	Pump	Solex	Pres
Vomag P45fz	4.9	166	66	S-36⅝x5½	S-40½x5½d	6613	4⅝x7⅛	50	1000	3-Plain	Int	L	2	CI	Spur	PrCs	Pump	Solex	Pres
Vomag P45rc	5.5	177	64	S-36⅝x5½	S-40½x5½d	6613	4⅝x7⅛	50	1000	3-Plain	Int	L	2	CI	Spur	PrCs	Pump	Solex	Pres
Vomag P50	3.3	163	61	P-38 x7	P-38 x7d	.....	4⅝x6⅝	50	1000	3-Plain	Det	I	4	CI	Heli	PrCs	Pump	Zenith	Pres

ABBREVIATIONS:

•—Seating Capacity. Special Bus Chassis
Al—Aluminum
Al D—Aluminum Disk
Art—Artillery
Ce—Center
Co—Cone
CI—Cast Iron
Ch—Chain
C St—Cast Steel
d—dual
D—Diesel
Det—Detachable
DR—Double Reduction
Eng—Unit with engine
E-Tr—External Transmission
E-FW—External Four Wheels
E-RW—External Rear Wheels
F—Valves in Head and Side
FlPr—Full pressure to all bearings including wrist pins
Fab—Fabric
½F—Semi Floating
¾F—Three Quarter Floating
GC—Grease Cups
Grav—Gravity
Heli—Helical Gear
HS—Hollow Steel Spoked
I—Valves in Head
IG—Internal Gear
I-FW—Internal Four Wheels
I-RW—Internal Rear Wheels
I-Tr—Internal Transmission
Int—Integral
L—Valves at side

Chassis Specifications—Continued

ELECTRICAL SYSTEM				TRANSMISSION						REAR AXLE							RUNNING GEAR					MAKE & MODEL
Ignition System					Gearset			Universals							Brakes		Steering Gear					
Make	Current Source	Equipped With Electrical Starter	Equipped With Electrical Generator	Clutch Type	Location	Number of Forward Speeds	Control Location	Front Type	Rear Type	Type	Final Drive	Axle Housing Material	Propulsion Taken By	Torque Taken By	Foot Type & Location	Hand Type & Location	Type	Location	Wheels Type	Frame Material	Chassis Lubrication	
													GERMAN									
Bosch	Mag.	No	No	Co	Eng.	4	Ri.	Met.	Non.	¾Fl.	DR	CSt.	TT.	TT.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	OC.	Adler L3D
Bosch	Mag.	No	No	Co	Eng.	4	Ri.				Ch	CSt.	RR.	SP.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	OC.	Adler L5A
Bosch	Mag.	No	Opt.	Co	Sep.	4	Ri.	Fab.		½Fl.	DR	CSt.	TT.	TT.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	OC.	Adler L2
Bosch	Mag.	Opt.	Opt.	MO.	Sep.	4	Ri.	Met.	Non.	¾Fl.	ST	CSt.	SP.	TT.	E-Tr.	I-Rw.	SN	Ri	Wood	RS.	GC.	Benz 1CN
Bosch	Mag.	Opt.	Opt.	MO.	Sep.	4	Ri.	Met.	Non.	¾Fl.	DR	CSt.	RR.	TT.	E-Tr.	I-Rw.	SN	Ri	Wood	RS.	GC.	Benz 2CN
Daem.	Mag.	Yes	Yes	MO.	Sep.	4	Ri.	Met.	Non.	¾Fl.	DR	CSt.	RR.	TT.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	GC.	Benz 3CN
Daem.	Mag.	Yes	Yes	MO.	Sep.	4	Ri.				Ch		RR.	SP.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	GC.	Benz 5K3
			Yes								Ch		RR.	SP.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	GC.	Benz
Bos.	Mag.	Opt.	Opt.	Co	Sep.	4	Opt.	Met.	Non.	¾Fl.	ST	CSt.	TT.	TT.	E-Tr.	I-Rw.	WS	Op.	CSt.	RS.	OC.	Buessing IIIG
Bos.	Mag.	Yes	Yes	Co	Sep.	4	Opt.	Met.	Non.	¾Fl.	ST	CSt.	TT.	TT.	E-Tr.	I-Rw.	WS	Op.	AID.	RS.	OC.	Buessing IIIGL
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Opt.	Met.	Non.	¾Fl.	DR	CSt.	TT.	TT.	E-FW.	I-FW.	WS	Op.	AID.	RS.	OC.	Buessing Six-Wheel
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Opt.	Met.	Non.	¾Fl.	DR	CSt.	TT.	TT.	E-Tr.	I-Rw.	WS	Op.	Disk	RS.	OC.	Buessing Six-Wheel
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Opt.				Ch		RR.	SP.	E-Tr.	I-Rw.	WS	Op.	Disk	RS.	OC.	Buessing Z
Daem.	Mag.	Opt.	Opt.	Co	Sep.	4	Ri.	Met.	Non.	½Fl.	DR	CSt.	TT.	TT.	E-Tr.	I-Rw.	WS	Ri	CSt.	RS.	OC.	Daag EC3
Daem.	Mag.	Opt.	Opt.	Co	Sep.	4	Ri.				Ch		RR.	SP.	E-Tr.	I-Rw.	WS	Ri	CSt.	RS.	OC.	Daag EK45
Daem.	Mag.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Non.	½Fl.	Sp	Al	TT.	TT.	I-FW.	I-FW.	WS	Ri	AID.	RS.	OC.	Daag AC2
Daem.	Mag.	Yes	Yes	Co	Sep.	4	Ri.				Ch		RR.	SP.	I-FW.	I-FW.	WS	Ri	Disk	RS.	OC.	Daag NK5
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Met.	¾Fl.	ST	St.	RR.	TA.	E-Tr.	I-Rw.	SN	Ri	Wood	RS.	GC.	Daimler DC2c
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Met.	¾Fl.	ST	CSt.	RR.	TA.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	GC.	Daimler DC3c
Bos.	Mag.	Yes	Yes	Co	Sep.	4	Ri.				IG		RR.	TA.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	GC.	Daimler DR4-5d
Bos.	Mag.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Met.	¾Fl.	ST	CSt.	RR.	TA.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	GC.	Daimler DC3d
Bos.	Mag.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Met.	¾Fl.	ST	CSt.	RR.	TA.	E-Tr.	I-Rw.	SN	Ri	Wood	RS.	GC.	Daimler DC1a
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Non.	½Fl.	DR	CSt.	SP.	TT.	E Tr.	I-Rw.	SN	Ri	Wood	RS.	OC.	Dinos 16-35
Bosch	Mag.	No	No	Co	Sep.	4	Ri.	Met.	Non.	¾Fl.	DR	CSt.	RR.	TT.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	GC.	Dixi 2
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Non.	¾Fl.	DR	CSt.	RR.	TT.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	GC.	Dixi 3
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.				Ch	CSt.	RR.	SP.	E Tr.	I-Rw.	SN	Ri	CSt.	RS.	GC.	Dixi 4/5
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Non.	¾Fl.	DR	SS	TT.	TT.	E Tr.	I-Rw.	WS	Ri	CSt.	RS.	OC.	Duerkopp 4/5
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Non.	¾Fl.	DR	SS	TT.	TT.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	OC.	Duerkopp 1.5
Bosch	Mag.	No	No	Co	Sep.	4	Ri.				Ch		RR.	SP.	E-Tr.	I-Rw.	WW	Ri	CSt.	RS.	GC.	Elite-Wagen ALZ5
Bosch	Mag.	No	No	Co	Sep.	4	Ri.	Met.	Non.	½Fl.	DR	CSt.	TT.	TT.	E-Tr.	I-Rw.	WW	Ri	Wood	RS.	GC.	Elite-Wagen BL1V
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Non.	½Fl.	DR	CSt.	TT.	TT.	E-Tr.	I-Rw.	WW	Ri	Wood	RS.	GC.	Elite-Wagen Ca1.5
Mea.	Mag.	Yes	Yes	MO.	Sep.	4	Ri.	Met.	Non.	¾Fl.	Wo	PrS	TT.	TT.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	GC.	Faun B
Mea.	Mag.	Yes	Yes	MO.	Sep.	4	Ri.	Met.	Met.	¾Fl.	Wo	CSt.	SP.	SP.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	GC.	Faun S
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.				Ch		RR.	SP.	E-Tr	I-Rw.	WS	Ri	CSt.	RS.	GC.	F.M.A. L1A
Mea.	Mag.	Yes	Yes	MD.	Sep.	4	Ce.	Met.	Non.	½Fl.	Wo	CSt.	RR.	TA.	I-Tr.	E-Rw.	SN	Le	Disk	RS.	OC.	Hansa-Lloyd L1.5
Bosch	Mag.	Yes	Yes	Co	Sep.	3	Ri.	Met.	Non.	¾Fl.	ST	CSt.	TT.	TT.	E-Tr.	I-Rw.	WS	Ri	Wood	RS.	GC.	Hercules B
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Met.	¾Fl.	ST	CSt.	SP.	SP.	E-Tr.	I-Rw.	WS	Ri	CSt.	RS.	GC.	Hercules G
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Met.	¾Fl.	ST	CSt.	SP.	SP.	E-Tr.	I-Rw.	WS	Ri	CSt.	RS.	GC.	Hercules DN
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.				Ch		RR.	SP.	E-Tr.	I-Rw.	WS	Ri	CSt.	RS.	GC.	Hercules E4
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Non.	¾Fl.	DR	CSt.	TT.	TT.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	GC.	Hille K3
Bosch	Mag.	No	No	Co	Sep.	4	Ri.				Ch		RR.	SP.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	GC.	Hille S5
Bosch	Mag.	Yes	Yes	MO.	Sep.	4	Ri.	Met.	Non.	¾Fl.	Sp	CSt.	TT.	TT.	I-Tr.	I-Rw.	SN	Ri	HS.	RS.	OC.	Horch IT
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ce.	Met.	Non.	¾Fl.	Sp	CSt.	TT.	TT.	I-Tr	E-Rw.	SN	Ri	CSt.	RS.	OC.	Komnick 3W1
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ce.				Ch		RR.	SP.	I-Tr.	E Rw.	SN	Ri	CSt.	RS.	OC.	Komnick 5L3
Opt.	Mag.	Yes	Yes	Co	Sep.	4	Ri.				Ch		RR.	SP.	E-Tr.	I-Rw.	SN	Ri	Disk	RS.	GC.	Krupp L5
Bosch	Mag.	Yes	Yes	Non	Eng.	3	Wh.								E-FW.	I-Rw.	WS	Ri	Disk	RS.	OC.	Lippische Werke
Bosch	Mag.	Yes	Yes	MO.	Sep.	4	Ri.	Met.	Non.	¾Fl.	ST	CSt.	TT.	TT.	E-Tr.	I Rw.	SN	Ri	Wood	RS.	GC.	Magirus 1C
Bosch	Mag.	Yes	Yes	MO.	Sep.	4	Ri.	Met.	Non.	¾Fl.	ST	CSt.	TT.	TT.	E Tr.	I-Rw.	SN	Ri	Wood	RS.	GC.	Magirus 2C1
Bosch	Mag.	Yes	Yes	MO.	Sep.	4	Ri.	Met.	Non.	¾Fl.	ST	CSt.	TT.	TT.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	GC.	Magirus 3C1S
Daem.	Mag.	Opt.	Opt.	Co	Eng.	4	Ri.	Met.	Non.	¾Fl.	DR	PrS	TT.	TT.	E-Tr.	I-Rw.	WS	Ri	Wood	RS.	GC.	M.A.N. C2T
Daem.	Mag.	Yes	Yes	Co	Eng.	4	Ri.	Met.	Non.	¾Fl.	DR	PrS	TT.	TT.	E Tr.	I-Rw.	WS	Ri	Wood	RS.	GC.	M.A.N. Bus
Bosch	Mag.	Yes	Yes	Co	Eng.	4	Ri.	Met.	Non.	¾Fl.	DR	PrS	TT.	TT.	E-Tr.	I-Rw.	WS	Ri	Wood	RS.	GC.	M.A.N. 3T
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.				Ch		RR.	SP.	E-Tr.	I-Rw.	WS	Ri	Wood	RS.	GC.	M.A.N. 4-5T
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.				Ch		RR.	SP.	I-Tr.	I-Rw.	WS	Ri	Disk	RS.	GC.	Mannesmann-Mulag 56C
Mea.	Mag.	Yes	Yes	Co	Sep.	4	Ri.				Ch		RR.	SP.	I-Tr.	I Rw.	WS	Ri	Disk	RS.	GC.	Mannesmann-Mulag 57Z
Mea.	Mag.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Non.	½Fl.	DR	CSt.	RR.	TA.	E-Tr.	I-Rw.	WS	Ri	Disk	RS.	GC.	Mannesmann-Mulag LC
Opt.	Mag.	No	No	Co	Sep.	4	Ri.	Fab.	Fab.	¾Fl.	Wo	CSt.	SP.	SP.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	OC.	Nacke 2T
Opt.	Mag.	No	No	Co	Sep.	4	Ri.	Fab.	Fab.	¾Fl.	Wo	CSt.	SP.	SP.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	OC.	Nacke 3T
Opt.	Mag.	No	No	Co	Sep.	4	Ri.	Fab.	Fab.	¾Fl.	Wo	CSt.	SP.	SP.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	OC.	Nacke 5T
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Fab.	¾Fl.	DR	CSt.	SP.	TA.	E-Tr.	I-Rw.	SN	Ri	Disk	RS.	OC.	N.A.G. KL8
Bosch	Mag.	Yes	Yes	Co	Sep.	7	Ri.	Met.	Fab.	¾Fl.	DR	CSt.	SP.	TA.	E Tr.	I-Rw.	SN	Ri	Disk	RS.	OC.	N.A.G. L8
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Fab.	¾Fl.	DR	CSt.	SP.	TA.	I-FW.	I-FW.	SN	Ri	Disk	RS.	OC.	N.A.G. KO8
Bosch	Mag.	Yes	Yes	Co	Sep.	7	Ri.	Met.	Fab.	¾Fl.	DR	CSt.	SP.	TA.	I-FW.	I-FW.	SN	Ri	Disk	RS.	OC.	N.A.G. KO
Bosch	Mag.	No	No	MO.	Sep.	4	Ri.	Met.	Met.	½Fl.	DR	CSt.	SP.	SP.	E-Tr.	I-Rw.	SN	Ri	Wood	RS.	GC.	N.S.U. 2.5T
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Met.	¾Fl.	DR	CSt.	SP.	TA.	E-Tr.	I-Rw.	WW	Ri	CSt.	RS.	GC.	Opel 3.5T
Bosch	Mag.	Opt.	Opt.	Co	Sep.	4	Ri.	Met.	Non.	½Fl.	DR	CSt.	TT.	TT.	E-Tr.	I-Rw.	SN	Ri	Disk	RS.	GC.	Stoewer 1T1
Bosch	Mag.	Opt.	Opt.	Co	Sep.	4	Ri.	Met.	Non.	½Fl.	DR	CSt.	TT.	TT.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	GC.	Stoewer 3T1
Bosch	Mag.	No	No	Co	Sep.	4	Ri.	Met.	Non.	¾Fl.	ST	CSt.	TT.	TT.	E-Tr.	I-Rw.	SN	Ri	Wood	RS.	OC.	Vomag P20f
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Non.	¾Fl.	ST	CSt.	TT.	TT.	E Tr.	I-Rw.	SN	Ri	Wood	RS.	OC.	Vomag P30x
Bosch	Mag.	Yes	Yes	Co	Sep.	4	Ri.				Ch		RR.	SP.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	OC.	Vomag P45zk
Daem.	Mag.	Yes	Yes	Co	Sep.	4	Ri.				Ch		RR.	SP.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	OC.	Vomag P45fz
Daem.	Mag.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Non.	¾Fl.	DR	CSt.	TT.	TT.	E-Tr.	I-Rw.	SN	Ri	CSt.	RS.	OC.	Vomag P45rc
Daem.	Maz.	Yes	Yes	Co	Sep.	4	Ri.	Met.	Non.	¾Fl.	Sp	St.	TT.	TT.	E-Tr.	I-Rw.	SN	Ri	Disk	RS.	OC.	Vomag P50

Le—Left
Mag—Magneto
MD—Multiple Dry Disk
MO—Multiple Disk in Oil
Met—Metal
Non—None
OC—Oil Cups
Op— } Optional
Opt— }
P—Pneumatics
PrCs—Pressure to all crankshaft and connecting rod bearings, splash to other parts

Pres—Pressure
PrS—Pressed Sheet
Ri—Right
RR—Radius Rods
RS—Rolled Steel
S—Solid
SpPr—Pressure to main crankshaft bearings only, splash to connecting rods and other parts
Sep—Separate Unit
SN—Screw and Nut
SP—Springs

Sp—Spiral Bevel
SS—Semi Steel
ST—Straight Bevel
St—Steel
T—Valves opposite
TA—Torque Arm
ThS—Thermo-syphon
TT—Torque Tube
Vacu—Vacuum
Wh—On steering wheel
WW—Worm and wheel
Wo—Worm
WS—Worm and Sector

Continental Truck Design Influenced by Bus Needs

CONTINENTAL truck design, as covered by this year's tabular specifications, is in reality limited to French and German production, for Italy is practically restricted to Fiat. Belgium is producing very few trucks.

Activity is greatest in vehicles for passenger transportation and in light trucks and express delivery vans for agricultural and commercial use. Farmers are buying, on a rather extensive scale, general service trucks having a load capacity of ¼ to 1½ tons. These follow passenger car design very closely, and, indeed, in many cases are passengers car chassis with an appropriate gear ratio.

The growth in the number of buses and motor coaches is quite remarkable and has done more to influence design than any other type of commercial vehicle. All over the country bus services are being inaugurated as feeders to railways or to meet the requirements of sparsely populated regions in which railroads cannot be operated on a paying basis.

BECAUSE of commercial development along these lines, pneumatic tires and front-wheel brakes are prominent on Continental commercial vehicles this year. The pneumatic tire has completely dethroned the solid for passenger coach services away from city streets, and even in Paris, which is the only French city with an important bus service, the possibility of the pneumatic is being considered. The clincher bead tire with detachable wheels, singles in front and duals in the rear, is the prevailing equipment. There is also quite an important use of pneumatics for freight haulage, every maker in France now offering 3, 4 and 5-ton trucks equipped with pneumatic tires, but usually giving the option of solid tires.

Front-wheel brakes have made their appearance on motor coaches and buses equipped with pneumatic tires, but are not used to any important degree on solid tire freight-carrying trucks. The general practice appears to be to fit front-wheel brakes when the chassis is intended for passenger service and to limit the same chassis to transmission and rear wheel brakes when it is intended for freight carrying. This is followed by such leading makers as Renault, Berliet, Saurer, De Dion Bouton, Delahaye and Panhard.

THE general practice on motor coaches is to apply brakes on all four wheels simultaneously through a servo mechanism, and to have an entirely independent set either on the rear wheels or on the transmission, with hand control. This gives a minimum of five brake drums, but in some cases there are seven sets of shoes. This differs from general passenger car practice, which is to have only four brake drums, with two sets of controls. All new taxicabs have four-wheel brakes.

During the year there has been an increase in the number of overhead valve engines, prominent examples being the Berliet motor coach chassis and the Fiat 2-tonner, but the change in this respect is not by any means so pronounced as in the passenger car field and the L-head engine holds a big majority. Magneto ignition is universal.

FINAL drive by side chains is losing ground, being replaced more by double reduction and internal gear drives than by worm gears. Because of the very extensive use of pneumatic tires, steel disk wheels are numerous. Where solid rubber tires are fitted the cast steel wheel is used rather more extensively than the wood type.

Although not figuring on the tables, there is a certain amount of activity being shown in electrics and in producer gas trucks, the Government giving its backing to both these developments in view of the possibility they afford of reducing gasoline imports. Conditions are rather favorable toward the development of both types for different classes of work, of course.

Rail cars have made their appearance this year for the first time in important numbers, the leading makers being Renault, De Dion Bouton and Berliet with gasoline engines, and Crochat with a gasoline-electric system. In all cases these firms are making use of the same engines as used for their trucks, with, in some cases, the same transmission and some of the same parts for the final drive.

TWENTY-SEVEN manufacturers are building trucks in Germany, turning out a total of seventy-three models, two of which are six-cylinder jobs. About half of the truck models carry L-head engines. All except two have pump cooling, while magneto ignition is universal.

The Benz works, after five years of experimental work, has brought out a new Diesel engine for trucks.

Cast steel wheels are used almost universally, as are semi-elliptic springs, front and rear. Fifty-five per cent of the steering gears are of the screw and nut type, the remainder being worm and sector.

The standard brake system consists of a pedal-operated transmission brake and a lever-operated rear wheel brake. Nine per cent of the seventy-three models have four-wheel brakes and 7.5 per cent have engine brakes. One Daag model has air brakes which act on all four wheels.

American Stock Gearset Specifications

MAKE AND MODEL	Designed For	Maximum Engine Torque (Lbs. Ft.)	Type	BEARINGS: Main Shaft	BEARINGS: Pilot	BEARINGS: Secondary Shaft	Inside Distance Between Bearings on Main Shaft (Ins.)	Distance Between Center Lines of Main and Secondary Shafts (Ins.)	Number of Forward Speeds	Type of Direct Drive Clutch	WIDTH OF GEAR FACES (INS.): Constant Mesh Set	Low	Second	Third	Fourth	Reverse	Housing Material	Shaft Material (S.A.E. Number)	Gear Material (S.A.E. Number)	Gear Teeth Pitch	Direct Drive On	GEAR RATIOS: Low	Second	Third	Fourth	Reverse	Gearset Location	Control Location	Sold with Clutch?	Standard S.A.E. Gearshift	WEIGHT (LBS.): Cast Iron	Aluminum	Recommended Type of Lubricant	MAKE AND MODEL
Brown-Lipe 20	C, T	85	Clash	Ball	Plain	Plain			3	GeT	9/16	5/8	5/8	Dir	None	5/8	Cl&Al	ChS	2320	6-8	3	3.34	1.66	1.00	None	4.17	Eng	Ce	Opt	Yes	100	86	Oil	Brown-Lipe 20
Brown-Lipe 20B	C, T	85	Clash	Roller	Roller	Roller			3	GeT	9/16	5/8	5/8	Dir	None	5/8	Cl&Al	ChS	2320	6-8	3	3.34	1.66	1.00	None	4.17	Eng	Ce	Opt	Yes		98	Oil	Brown-Lipe 20B
Brown-Lipe 30	C, T	135	Clash	Roller	Roller	Ball			3	GeT	5/8	3/4	3/4	Dir	None	3/4	Cl&Al	ChS	2320	6-8	3	3.33 / 4.09	1.68	1.00	None	5.00 / 4.35	Eng	Ce	Opt	Yes	142	95	Oil	Brown-Lipe 30
Brown-Lipe 30A	Cars	135	Clash	Ball	Ball	Ball			3	GeT	5/8	3/4	3/4	Dir	None	3/4	Alum	ChS	2320	6-8	3	3.33	1.68	1.00	None	4.35	Eng	Ce	Opt	Yes		88	Oil	Brown-Lipe 30A
Brown-Lipe 31	Trucks	180	Clash	Roller	Roller	Roller			3	GeT	5/8	3/4	3/4	Dir	None	3/4	Cl&Al	ChS	2320	6-8	3	4.80	2.25	1.00	None	6.00	Eng	Ce	Opt	Yes			Oil	Brown-Lipe 31
Brown-Lipe 35	C, T	180	Clash	Roller	Roller	Roller			4	GeT	5/8	3/4	3/4	3/4	Dir	3/4	Cl&Al	ChS	2320	6-8	4	5.35	2.84	1.76	1.00	6.25	E-A	Ce	Opt	Yes	198*	150	Oil	Brown-Lipe 35
Brown-Lipe 35	C, T	180	Clash	Roller	Roller	Roller			4	GeT	5/8	3/4	3/4	Dir	3/4	3/4	Cl&Al	ChS	2320	6-8	3	3.29	1.61	1.00	.78	3.94	E-A	Ce	Opt	Yes	198*	150	Oil	Brown-Lipe 35
Brown-Lipe 35	Trucks	180	Clash	B&R	Roller	Roller			7	GeT	5/8	3/4	3/4		3/4	Dir	CastI	ChS	2320	6-8	6	8.54	3.29a	1.61b	.78c	3.84*	SeU	Ce	Opt	Yes			Oil	Brown-Lipe 35
Brown-Lipe 50	C, T	210	Clash	Roller	Roller	Roller			4	GeT	7/8	1	1	Dir	1	3/4	Cl&Al	ChS	2320	6-8	3	3.29	1.61	1.00	.78	3.94	E-A	Ce	Opt	Yes			Oil	Brown-Lipe 50
Brown-Lipe 50	C, T	210	Clash	Roller	Roller	Roller			4	GeT	7/8	1	1	1	Dir	3/4	Cl&Al	ChS	2320	6-8	4	5.35	2.84	1.76	1.00	6.25	E-A	Ce	Opt	Yes			Oil	Brown-Lipe 50
Brown-Lipe 51	T, B	210	Clash	Roller	Roller	Roller			4	GeT	7/8	1 1/16	1	Dir	1 1/16	Cl&Al	ChS	2320	6-8	4	5.35	2.84	1.76	1.00	6.25	E-A	Ce	Opt	Yes			Oil	Brown-Lipe 51
Brown-Lipe 51	T B	210	Clash	Roller	Roller	Roller			4	GeT	7/8	1 1/16	1	Dir	1	1 1/16	Cl&Al	ChS	2320	6-8	3	3.29	1.61	1.00	.78	3.94	E-A	Ce	Opt	Yes		196	Oil	Brown-Lipe 51
Brown-Lipe 55	T, B, Tr	250	Clash	Roller	Roller	Roller			4	GeT	3/4	1 1/16	1		7/8	Dir	1 1/8	Cl&Al	ChS	2320	5-7	5.35	2.84	1.70	1.00	6.25	E-A	Ce	Opt	Yes	225*		Oil	Brown-Lipe 55
Brown-Lipe 55	T, B, Tr	250	Clash	Roller	Roller	Roller			4	GeT	3/4	1 1/16	1	Dir	7/8	1 1/8	Cl&Al	ChS	2320	5-7	3	3.95	1.89	1.00	.78	4.75	E-A	Ce	Opt	Yes	225*		Oil	Brown-Lipe 55
Brown-Lipe 55	Trucks	250	Clash	B&R	Roller	Roller			7	GeT	3/4	1 1/16	1		7/8	Dir	1 1/8	CastI	ChS	2320	5-7	9.50	4.53a	2.40b	1.00c	6.00*	SeU	Ce	Opt	Yes			Oil	Brown-Lipe 55
Brown-Lipe 55	Trucks	250	Clash	B&R	Roller	Roller			7	GeT	3/4	1 1/16	1		7/8	Dir	1 1/8	CastI	ChS	2320	5-7	9.50	3.95a	1.88b	.78c	4.65*	SeU	Ce	Opt	Yes			Oil	Brown-Lipe 55
Brown-Lipe 60	T, Tr	275	Clash	Roller	Roller	Roller			4	GeT	1 1/4	1 1/2	1 1/2	Dir	2 1/2	1 3/8	Cl&Al	ChS	2320	5-7	3	3.95	1.89	1.00	.78	4.75	SeU	Ce	Opt	Yes	250		Oil	Brown-Lipe 60
Brown-Lipe 60	T, B, Tr	275	Clash	Roller	Roller	Roller			4	GeT	1 1/4	1 1/2	1 1/2	1 1/2	Dir	1 3/8	Cl&Al	ChS	2320	5-7	4	5.35	2.84	1.76	1.00	6.43	SeU	Ce	Opt	Yes	250		Oil	Brown-Lipe 60
Brown-Lipe 60	T, Tr	275	Clash	Roller	Roller	Roller			3	GeT	1 1/4	1 1/2	1 1/2	Dir	None	1 1/2	Alum	ChS	2320	5-7	3	4.00	1.76	1.00	None	4.90	Eng	Ce	Opt	Yes		189	Oil	Brown-Lipe 60
Brown-Lipe 60†	Trucks	292	Clash	Roller	Roller	Roller			3	GeT	1 1/4	1 1/2	Dir	1 1/2	None		Cl&Al	ChS	2320	5-7	2	2.25	1.00	.67	None		SeU	C-S	Opt	Yes			Oil	Brown-Lipe 60†
Brown-Lipe 60**	Buses	275	Clash	Roller	Roller	Roller			4	GeT	1 1/4	1 1/2	1 1/2	1 1/2	Dir	1 3/8	Alum	ChS	2320	5-7	4	4.00	2.84	1.50	1.00	4.81	SeU	C-S	Opt	Yes			Oil	Brown-Lipe 60**
Brown-Lipe 60	Trucks	275	Clash	B&R	Roller	Roller			7	GeT	1 1/4	1 1/2	1 1/2	1 1/2	Dir	1 3/8	CastI	ChS	2320	5-7	7	9.50	4.53a	2.40b	1.00c	6.00*	E-A	Ce	Opt	Yes			Oil	Brown-Lipe 60
Brown-Lipe 60	Trucks	275	Clash	B&R	Roller	Roller			7	GeT	1 1/4	1 1/2	1 1/2	1 1/2	Dir	1 3/8	CastI	ChS	2320	5-7	6	9.50	3.95a	1.88b	.78c	4.65*	SeU	Ce	Opt	Yes			Oil	Brown-Lipe 60
Cotta Gear 12	T, Tr		IndC	Ball	Plain	Ball	12 3/4	5.55	3	Jaw		1 1/2	1 1/2	1 1/2	None	1 1/2				4-5	3	4.51	1.81	1.00	None	6.00	SeU			Yes				Cotta Gear 12
Cotta Trans A-AAU	T, B	125	IndC	Ball	Ball	Ball	12.50	4.50	4*	Jaw	3/4	3/4	3/4	3/4	3/4	3/4	S St	3120	3120	6-8	4	5.20	3.68	1.86	1.00	4.66	E-A	Ce	Opt	Yes	160†		NoF	Cotta Trans A-AAU
Cotta Trans R&RU	T, B	200	IndC	Ball	Ball	Ball	14.50	4.90	4*	Jaw	1	1	1	1	1	1	S St	3120	3120	5½-7½	4	5.20	3.68	1.86	1.00	4.66	E-A	Ce	Opt	Yes	225†		NoF	Cotta Trans R&RU
Cotta Trans S&SU	T, B	290	IndC	Ball	Ball	Ball	16.50	5.40	4*	Jaw	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	S St	3120	3120	5-7	4	5.20	3.68	1.86	1.00	4.66	E-A	Ce	Opt	Yes	300†		NoF	Cotta Trans S&SU
Cotta Trans T	T, B	375	IndC	Ball	Ball	Ball	18.50	6.00	4	Jaw	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	S St	3120	3120	4½-6	4	5.20	3.68	1.86	1.00	4.66	E-A	C-S	Opt	Yes	335†		NoF	Cotta Trans T
Cotta Trans TS	T, B, Tr	375	IndC	Ball	Ball	Ball	7.18	5.40 / 6.00	2	Jaw	1 1/4 / 1 1/2	1 1/4 / 1 1/2	1 1/4 / 1 1/2	None	None	None	S St	3120	3120	5-7 / 4½-6	2	2.00	1.00	None	None	None	SeU	Ce	Opt	Yes	165†		NoF	Cotta Trans TS
Cotta Trans FA	T, RC, Tr	500	IndC	Ball	Ball	Ball	16.00	6.00	3	Jaw	2	2	2	2	None	2	S St	3120	3120	4½-6	3	4.00	2.00	1.00	None	4.12	SeU	C-S	Opt	Yes	400†		NoF	Cotta Trans FA
Covert EB	Cars	125	Clash	Ball	Plain	Plain	5.62	3.25	3	GeT	11/16	5/8	5/8	11/16	None	5/8	CastI		2320	6-8	3	2.86	1.70	1.00	None	3.57	Eng	Ce	Yes	Yes			Oil		Covert EB
Covert JWC	C, T		IndC	Ball	Roller	Ball	6.56	3.75	3	GeT	3/4	13/16	13/16	13/16	None	13/16	CastI		2320	6-8	3	3.62	1.91	1.00	None	4.46	Eng	Ce	Yes	Yes			Oil		Covert JWC
Covert RA3	Trucks		IndC	Ball	Roller	Ball	8.37	4.50	3	GeT	1	1	1	1	None	15/16	CastI		2320	6-8	3	3.67	1.60	1.00	None	4.37	SeU	Ce	No	Yes					Covert RA3
Covert RU3C	Trucks		IndC	Ball	Roller	Ball	8.37	4.50	3	Jaw	1	1	1	1	None	15/16	CastI		2320	6-8	3	3.67	1.60	1.00	None	4.37	Eng	Ce	Yes	Yes					Covert RU3C
Covert RA4	Trucks		IndC	Ball	Roller	Ball	11.37	4.50	4	GeT	1	1 1/4	1	1	1	1 1/16	CastI		2320	6-8	4	4.76	2.70	1.60	1.00	5.95	SeU		No	Yes					Covert RA4
Covert RU4C	Trucks		IndC	Ball	Roller	Ball	11.37	4.50	4	Jaw	15/16	1 1/4	1	15/16	Dir	1 1/16	CastI		2320	6-8	4	4.76	2.70	1.60	1.00	5.95	Eng	Ce	Yes	Yes					Covert RU4C
Covert SB	Trucks		Clash	Ball	Roller	Ball	13.12	5.20	4	GeT	1 3/8	1 7/16	1 1/4	1 3/8	1 3/8	1 1/4	CastI		2320	5-7	4	5.07	3.04	1.63	1.00	6.76	SeU		No	Yes					Covert SB
Detroit CN	Cars	90	Clash	B-R	Plain	Plain	5.00	2.75	3	GeT	9/16	1/2	5/8	3/8		1/2	CastI		2320	2345	8-10	3	3.38	1.61	1.00	None	4.16	Eng	Ce	No	Yes	70		Oil		Detroit CN
Detroit LA	C, T	135	Clash	Ball	R-P	R-P	6.12	3.35	3	GeT	5/8	11/16	13/16	7/16		11/16	CastI		2320	2345	7-9	3	3.11	1.69	1.00	None	3.76	E-A	Ce	Opt	Yes	92		Oil		Detroit LA
Detroit KY	C, T	150	Clash	Ball	R-P	R-P	6.62	3.35	3	GeT	3/4	3/4	13/16	7/16		3/4	CastI		2320	2345	7-9	3	3.42	1.85	1.00	None	4.15	E-A	Ce	Opt	Yes	100		Oil		Detroit KY
Detroit R&RU	T, B	200	Clash	Ball	Roller	Ball	9.87	4.42	4	GeT	7/8	1	1	1	1/2	1	CastI		2320	2345	6-8	4	5.90	3.23	1.75	1.00	7.08	E-A	Ce	No	Yes	180		NoF		Detroit R&RU
Detroit R&RU	Buses	200	Clash	Ball	Roller	Ball	9.87	4.42	4	GeT	7/8	1	1	1	1	1	CastI		2320	2345	6-8	3	3.14	1.70	1.00	.63	3.74	E-A	Ce	No	No	205		Oil		Detroit R&RU
Detroit W	Buses	300	Clash	Ball	Roller	Ball	2.19	5.00	4	GeT	1	1 3/8	1 1/4	1 1/4	9/16	1 3/8	CastI		2320	23.5	6-8	4	6.05	3.47	1.81	1.00	7.00	SeU	Ce	No	Yes	225		NoF		Detroit W
Dundore M35	Cars		Clash	Ball	Plain	Ball	7.00	3.66	3	GeT	3/4	13/16	13/16	13/16		13/16	CastI		2315	2320	6-8	3	3.07	1.76	1.00	None	4.01	Eng	Ce	No	Yes	120	85			Dundore M35
Dundore R	Cars		Clash	Ball	Ball	Ball	10.00	4.50	4	GeT	3/4	13/16	13/16	3/4	3/4	13/16	Alum		2345	3250	6-8	3	2.69	1.56	1.00	.73	3.46	E-A	Ce	No	Yes		120			Dundore R
Dundore F50	Trucks		Clash	Ball	Ball	Ball	8.62	4.25	3	GeT	7/8	1	1	Dir	None	1	CastI		2345	2320	6-8	3	3.36	1.90	1.00			E-A	Ce	No	Yes	155				Dundore F50
Durston 04700	C, T	125	Clash	Roller	Roller	Plain	5.31	3.31	3	GeT	5/8	1	5/8	5/8	None		CastI		3140	2320	6-8	3	3.09	1.85	1.00	None	3.87	Eng	Ce	No	Yes	75		Oil		Durston 04700
Durston 04600	C, T	125	Clash	Ball	Plain	Plain	5.31	3.31	3	GeT	5/8	1	5/8	5/8	None	5/8	CastI		3140	2320	6-8	3	3.09	1.85	1.00	None	3.87	Eng	Ce	No	Yes	75		Oil		Durston 04600
Fuller F	C, T, B, Tr	135§	Clash	Ball	Plain	Plain	5.68	3.08	3	GeT	9/16	5/8	5/8	5/8	None	5/8	CastI		2320	2320	6-8	3	3.40	1.90	1.00	None	3.40	Eng	Ce	Opt	Yes			Oil		Fuller F
Fuller A	C, T, B, Tr	142§	Clash	Ball	Plain	Plain	5.68	3.08	3	GeT	9/16	5/8	3/4	Dir	None	5/8	CastI		2320	7-9	3	3.20	1.76	1.00	None	3.20	Eng	Ce	No	Yes			Oil		Fuller A
Fuller TU5	C, T, B, Tr		Clash	Ball	Ball	Ball	7.00	3.84	3	GeT	3/16	7/8	7/8	1/2	None	7/8	CastI		2320	2320	6-8	3	3.00	1.70	1.00	None	3.50	Eng	Ce	Opt	Yes			Oil		Fuller TU5
Fuller S-SU	C, T, B, Tr	257§	Clash	Ball	Ball	Ball	8.37	4.50	4	GeT	1	1	7/8	7/8	1/2	1 1/8	CastI		2320	2320	6-8	4	4.80	3.00	1.60	1.00	6.50	E-A	Ce	Opt	Yes			Oil		Fuller S-SU
Fuller SU	Trucks	162	Clash	Ball	Ball	Ball	7.00	3.84	3	GeT	13/16	7/8	7/8	1/2	None	7/8	CastI		2320	2328	6-8	3	4.00	1.70	1.00	None	4.50	Eng	Ce	Opt	Yes			Oil		Fuller SU
Fuller H-HU	T, B, Tr	300§	Clash	Ball	Ball	Ball	12.25	5.25	4	GeT	1 1/4	1 1/2	1 1/4	1 1/4	5/8	1 1/2	CastI		2320	2320	6-8	4	6.00	3.20	1.70	1.00	6.30	E-A	Ce	Opt	Yes			Oil		Fuller H-HU
Grant-Lees 573	C, T, B	190	Clash	B-R	Plain	Plain			3	GeT	11/16	3/4	3/4	9/16	None	3/4	CastI		2320	2320	7-9	3	3.40	1.72	1.00	None	4.04	Eng	Ce	No		100				Grant-Lees 573
Grant-Lees 515	C, T, B	190	Clash	B-P	Ball				3	GeT	11/16	3/4	3/4	9/16	None	3/4	CastI		2320	2320	6-8	3	3.25	1.70	1.00	None	3.75	Eng	Ce	No		100				Grant-Lees 515
Grant-Lees K	C, T	140	Clash	B-R	Plain				3	GeT	9/16	5/8	7/16	Dir	None	5/8	CastI		2320	2320	7-9	3	2.98	1.89	1.00	None	3.62	Eng	Ce	No		80				Grant-Lees K
Mechanics MU	C, T	115	Clash	Ball	Plain	Plain	5.87	3.12	3	GeT	9/16	5/8	11/16	11/32	None	5/8	CI&Al		1030	5150	7-9	3	3.07	1.76	1.00	None	4.02	Eng	Ce	No	Yes	55	45	Oil		Mechanics MU
Mechanics K	Cars	160	Clash	Ball	Roller	R-P	6.50	3.37	3	GeT	19/32	11/16	25/32	1	None	11/16	CastI		5140	5150	7-9	3	3.11	1.69	1.00	None	3.78	Eng	Ce	No	Yes	72	57	Oil		Mechanics K
Muncie Gear T5	C, T	165	Clash	Ball	Plain	Plain	5.87	3.00	3	GeT	9/16	5/8	11/16	Dir	None	5/8	CastI		3120	3120	6-8	3	2.80	1.75	1.00	None	2.80	E-A	Ce	No	Yes	85	60	Oil		Muncie Gear T5
Muncie Gear T23N	C, T	165	Clash	Ball	Roller	Ball	7.00	4.00	3	GeT	3/4	13/16	25/32	Dir	None	13/16	CastI		3120	3120	6-8	3	4.00	2.00	1.00	None	5.33	Eng	Ce	Opt	Yes	117		Oil		Muncie Gear T23N
Muncie Prod 551475	Cars	115	Clash	Ball	Plain	Plain	6.14	3.21	3	GeT	13/32	11/16	3/4	Dir		5/8	CastI	Car	Spec	7-9	3	3.32	1.77	1.00	None	4.27	E-A	Ce	No	Yes	61		Oil		Muncie Prod 551475
Warner Gear T64J	Cars	150	Clash	Ball	Roller	Plain	6.09	3.35	3	GeT	9/16	11/16	3/4	9/32	None	11/16	CastI		1015	5150	7-9	3	3.11	1.69	1.00	None	3.28	Eng	Ce	No	Yes	100		Oil		Warner Gear T64J
Warner Gear T66	C, T	200	Clash	Ball	Roller	Roller	7.13	4.00	3	GeT	3/4	3/4	5/8	7/16	None	3/4	CastI		1015	5150	6-8	3	3.01	1.81	1.00	None	3.70	Eng	Ce	No	Yes	130		Oil		Warner Gear T66
Warner Gear T53	Trucks	220	Clash	Ball	Roller	Ball	11.71	5.00	4	GeT	1	1 1/4	1 1/4	1 1/4	5/16	1 15/64	CastI		2345	23.5	5-7	4	4.99	3.16	1.79	1.00	5.78	SeU	Opt	No	Yes	220		Oil		Warner Gear T53
Willys-Morrow C	C, T	150	IndC	Ball	Plain	Plain	7 12	3.28	3	GeT	11/16	3/4	11/16		5/16	None		CastI		1045	Spec	7-9	3	3.20	1.90	1.00	None	4.10	Eng	C-S	No	Yes	80		Oil		Willys-Morrow C

ABBREVIATIONS:

******—Auxiliary Transmission
‡—Special Design
†—Semi Steel
*—Optional
§—Maximum varies according to application
a—3rd Ratio
Alum—Aluminum
d—5th Ratio
B—Buses
B & R—Ball & Roller
c—7th Ratio
C—Cars
Car—Carbon Steel
Cast I—Cast Iron
Ce—Center
ChS—Chrome Steel
CI & Al—Cast Iron and Aluminum
C-S—Center or Side
Dir—Direct
E-A—Engine or Amidships
Eng—Unit with Engine
GeT—Gear Teeth
IndC—Individual Clutch
NoF—Non Fluid Oil
Opt—Optional
RC—Rail Cars
R-P—Roller or Plain
SeU—Separate Unit
Spec—Special
S St—Semi Steel
T—Trucks
Tr—Tractors

American Stock

MAKE AND MODEL	Designed For (Ins.)	Number of Cylinders, Bore and Stroke (Ins.)	Rated H.P. (N.A.C.C.)	R.P.M. at Maximum Brake H.P.	Piston Displacement (Cu. Ins.)	Compression Ratio	Number of Point Suspension	CYLINDERS: Head	CYLINDERS: No. Cast in One Piece	CYLINDERS: Detachable Liners Used?	CRANKCASE: Upper Half: Integral with Cylinders?	CRANKCASE: Upper Half: Material	CRANKCASE: Material (Lower Half)	VALVE ARRANGEMENT: Arrangement	VALVE ARRANGEMENT: Hand Material	VALVE ARRANGEMENT: Clear Diameter (Ins.)	VALVE ARRANGEMENT: Lift (Ins.)	FRONT END DRIVE: Type	FRONT END DRIVE: Non-Metallic Gear Used On?	PISTONS: Material	PISTONS: Length (Ins.)	PISTONS: Weight (with Pins, Rings & Bushings) Ozs.	PISTONS: Piston Pins: Diameter and Length (Ins.)	PISTONS: Piston Pins: Pin Bearing (Ins.)	PISTONS: Number of Rings per Piston
Ansted.....M	Cars & B.....	6-3⅝x4½	26.34	.....	232.7	4.5	3*	Det..	6	No...	Int..	SS...	.....	I...	Tun..	1.50	.44	Chain.	None..	CI....	3.45	21.6	1.00x3.00	Rod..	2
Ansted.....F	Cars & B.....	6 3⅝x5¼	26.34	.....	271.5	4.5	3*	Det..	6	No...	Int..	SS...	.....	I...	Tun..	1.50	.44	Chain.	None..	CI....	3.45	21.6	1.00x3.00	Rod..	2
Automatic.....J	T & Tr.....	1-5 x7	40.00	38-800	549.9	4.0	4	Int..	1	No...	Sep..	Iron.	Iron.	L...	Car..	2.25	.44	Spur..	None..	CI....	6.68	160.0	1.43x4.62	Rod..	4
Automatic.....J5½	T & Tr.....	1-5½x7	48.40	48-800	665.2	4.0	4	Int..	1	No...	Sep..	Iron.	Iron.	L...	Car..	2.25	.44	Spur..	None..	CI....	7.00	160.0	1.43x4.62	Rod..	4
Automatic.....M	T & Tr.....	1-6½x8	67.10	62-675	1061.7	4.0	4	Det..	1	.....	Sep..	Iron.	Iron.	L...	Car..	2.50	.56	Spur..	None..	CI....	9.00	356.0	1.68x1.12	Rod..	4
Automatic.....N	T & Tr.....	1-7½x9	89.80	75-540	1588.0	4.0	4	Det..	1	No...	Sep..	Iron.	Iron.	L...	Car..	3.00	.56	Spur..	None..	CI....	10.50	518.0	2.00x7.12	Rod..	4
Automatic.....R	T & Tr.....	4-8½x10	111.50	100-500	2288.0	4.0	4	Det..	1	No...	Sep..	Iron.	Iron.	L...	Car..	3.25	.68	Spur..	None..	CI....	12.31	752.0	2.43x8.00	Rod..	4
Beaver.....JD	Tractors.....	6-4¾x6	54.15	76-1000	637.9	4.5	3*	Det..	2	No...	Sep..	SS...	Iron.	I...	Tun..	2.00	.37	Heli...	None..	CI....	5.31	92.0	1.50x4.50	Pist..	4
Beaver.....JC	Tractors.....	4-4¾x6	36.10	56-1000	425.3	4.5	3*	Det..	2	No...	Sep..	Iron.	Iron.	I...	Tun..	2.00	.37	Heli...	None..	CI....	5.31	91.0	1.50x4.50	Pist..	4
Beaver.....JB	Tractors.....	4-4¾x6	36.10	46-1200	425.3	....	3*	Det..	4	No...	Sep..	Iron.	Iron.	I...	CI...	2.00	.37	Heli...	None..	CI....	5.31	134.0	1.50x4.25	Pist..	4
Beaver.....JA	Trucks.....	4-4½x6	32.40	41-1100	381.7	4.5	3*	Det..	4	No...	Sep..	Iron.	Iron.	I...	Tun..	2.00	.37	Heli...	None..	CI....	5.31	118.0	1.50x4.25	Pist..	4
Buda.....MU	Trucks.....	4-3⅝x5½	21.03	31-1825	210.6	4.5	3	Det..	4	No...	Sep..	SS...	Iron.	L...	CI...	.....	.28†	Heli...	Accx..	SS....	4.50	56.0	1.06x3.06	Rod..	4
Buda.....WTU	Trucks.....	4-3⅞x5⅛	22.50	37-1850	226.4	4.1	3	Det..	4	No...	Sep..	Al...	Al...	L...	CI...	.....	.28†	Heli...	Accx..	SS....	4.50	55.2	1.06x3.25	Rod..	4
Buda.....CBU	Buses.....	4-3¾x5¼	22.50	.....	231.9	....	3	Det..	4	No...	Sep..	Al...	Al...	L...	CI...	1.62	.31†	Heli...	Accx..	SS....	5.00	68.7	1.06x3.25	Rod..	4
Buda.....GBU	Buses.....	4-4 x5¼	25.60	.....	263.9	....	3	Det..	4	No...	Sep..	Al...	Al...	L...	CI...	1.62	.31†	Heli...	Accx..	SS....	5.00	62.5	1.06x3.44	Rod..	4
Buda.....CTU	Trucks.....	4-3¾x5¼	22.50	36-2000	231.9	4.2	3	Det..	4	No...	Sep..	SS...	Iron.	L...	CI...	1.62	.28†	Heli...	Accx..	SS....	5.00	68.5	1.06x3.25	Rod..	4
Buda.....GTU	Trucks.....	4-4 x5¼	25.60	36-1600	263.9	4.1	3	Det..	4	No...	Sep..	SS...	Iron.	L...	CI...	1.62	.28†	Heli...	Accx..	SS....	5.00	71.5	1.06x3.44	Rod..	4
Buda.....EBU	Buses.....	4-4¼x5½	28.90	48-1850	312.0	4.1	3	Det..	4	No...	Sep..	Al...	Al...	L...	CI...	1.87	.31†	Heli...	Accx..	SS....	5.37	73.0	1.12x3.69	Rod..	4
Buda.....ETU	Trucks.....	4-4¼x5½	28.90	37-1550	312.0	3.8	3	Det..	4	No...	Sep..	SS...	Iron.	L...	CI...	1.87	.28†	Heli...	Accx..	SS....	5.37	95.5	1.12x3.68	Rod..	4
Buda.....YBU	Buses.....	4-4½x6	32.40	60-1700	381.7	4.2	3	Det..	4	No...	Sep..	Al...	Al...	L...	CI...	2.12	.31†	Heli...	Accx..	SS....	6.25	95.5	1.25x3.87	Rod..	4
Buda.....YTU	Trucks.....	4-4½x6	32.40	50-1400	381.7	4.0	3	Det..	4	No...	Sep..	SS...	Iron.	L...	CI...	2.12	.28†	Heli...	Accx..	SS....	6.25	120.5	1.25x3.87	Rod..	4
Buda.....XTU	Trucks.....	4-4¼x6	28.90	50-1400	340.4	4.0	3	Det..	4	No...	Sep..	SS...	Iron.	L...	CI...	2.12	.28†	Heli...	Accx..	SS....	6.25	100.7	1.25x3.62	Rod..	4
Buda.....BTU	Trucks.....	4-5 x6½	40.00	53-1250	510.5	3.8	3	Det..	4	No...	Sep..	SS...	Iron.	L...	CI...	2.25	.31†	Heli...	Accx..	SS....	6.75	145.2	1.37x4.37	Rod..	4
Buda.....ATU	Trucks.....	4-4¾x6½	36.10	53-1400	460.7	3.9	3	Det..	4	No...	Sep..	SS...	Iron.	L...	CI...	2.25	.31†	Heli...	Accx..	SS....	6.75	135.0	1.37x4.37	Rod..	4
Buffalo.....BA	T & Tr.....	4-3½x5	19.60	32-1300	192.4	....	3	Det..	4	No...	Int..	Iron.	PS...	L...	CI...	1.75	.31†	Heli..	None..	CI....	3.75	43.0	1.09x3.25	Rod..	3
Buffalo.....RT	T & Tr.....	1-5 x6	40.00	62-1400	471.2	....	3	Int..	2	No...	Sep..	Iron.	Iron.	L...	Car..	2.25	.31†	Heli...	None..	CI....	6.19	118.0	1.23x4.62	Pist..	4
Buffalo.....CT	Tractors.....	4-5½x7	48.40	75-1200	665.2	....	3	Int..	2	No...	Sep..	Iron.	Iron.	L...	Car..	2.25	.31†	Heli...	None..	CI....	6.00	190.0	1.37x5.00	Pist..	3
Buffalo.....CE	Tractors.....	4-6½x9	72.90	100-1000	1252.0	....	4	Int..	2	No...	Sep..	Iron.	Iron.	L...	Car..	2.87	.44†	Heli...	None..	CI....	7.69	274.0	1.62x6.25	Pist..	3
Climax.....K, KU, KL	T & Tr.....	4-5 x6½	40.00	57-1200	510.5	4.2	3*	Det..	2	No...	Sep..	Iron.	Iron.	L...	CI...	2.25	.31†	Heli...	None..	CI....	5.75	132.0	1.36x4.75	Rod..	3
Climax.....R-6	Rail C.....	6-5½x7	73.60	125-1200	997.9	4.4	4	Det..	2	Yes.	Sep..	Iron.	Iron.	L...	CI...	2.25	.37	Heli...	None..	CI....	6.44	162.0	1.50x4.87	Pist..	3
Climax.....T & TU	T & Tr.....	4-5½x7	48.40	81-1200	665.2	4.3	4	Det..	2	.....	Sep..	Iron.	Iron.	L...	CI...	2.25	.31	Spur..	None..	CI....	7.00	168.0	1.50x5.19	Rod..	3
Continental.....7U	Cars.....	6-3⅛x4½	23.44	50-2600	195.6	4.8	3	Det..	6	Yes.	Int..	Iron.	PS...	L...	Car..	1.50	.31	Chain.	None..	CI....	3.25	27.0	.73x1.37	Pist..	3
Continental.....8R	Cars.....	6-3⅜x4½	27.34	58-2300	241.6	4.4	3	Det..	6	Yes.	Sep..	Al...	PS...	L...	Car..	1.50	.31	Heli..	Idler..	CI....	4.06	35.0	.87x1.37	Rod..	3
Continental.....6M	T & Buses....	6-3⅜x4½	27.34	58-2300	241.6	4.4	3	Det..	6	Yes.	Sep..	Al...	PS...	L...	Sil..	1.50	.31	Heli...	None..	CI....	4.06	35.0	.87x1.37	Rod..	3
Continental.....6T	Cars.....	6-3⅜x5¼	31.54	70-2400	234.8	4.4	3	Det..	6	Yes.	Sep..	Al...	PS...	L...	Car..	1.81	.31	Chain.	None..	CI....	4.37	41.0	1.12x1.75	Rod..	3
Continental.....6B	T & Buses....	6-3¾x5	33.75	70-2200	331.4	4.3	3	Det..	6	Yes.	Sep..	Al...	PS...	L...	Sil..	1.81	.31	Heli...	None..	CI....	4.50	43.0	1.12x1.75	Rod..	3
Continental.....N	T & Buses....	4-3¾x5	22.50	38-2200	220.9	4.3	3	Int..	4	No...	Sep..	Al...	PS...	L...	Car..	1.53	.28†	Heli...	None..	CI....	3.75	47.2	1.09x1.50	Rod..	3
Continental.....J4	T, B, Tr.....	4-3¾x5	22.50	32-1580	220.9	4.0	3	Det..	4	No...	Sep..	Al...	Al...	L...	Car..	1.62	.31	Heli...	None..	CI....	4.87	58.0	1.12x1.75	Rod..	4
Continental.....K4	T, B, Tr.....	4-4½x5¼	27.23	36-1500	280.6	3.8	3	Det..	4	Yes.	Sep..	Al...	Al...	L...	Car..	1.87	.31	Heli...	None..	CI....	5.44	65.5	1.25x1.87	Rod..	4
Continental.....L4	T, B, Tr.....	4-4½x5½	32.40	43-1300	349.9	3.4	3	Det..	2	Yes.	Sep..	Al...	Al...	L...	Car..	2.00	.31	Heli...	None..	CI....	5.94	84.0	1.37x2.00	Rod..	4
Continental.....B5	T, B, Tr.....	4-4¾x6	36.10	52-1400	425.3	....	3	Det..	2	Yes.	Sep..	Al...	Al...	L...	Car..	2.12	.31	Heli...	None..	CI....	6.12	114.0	1.50x2.37	Rod..	4
Erd.....B6	T, B, Tr.....	6-4 x6	38.40	51-1000	452.4	4.8	3	Det..	4	.....	Sep..	Iron.	Al...	I...	CI...	2.00	.41	Heli...	None..	CI....	.....	.....	1.37x3.69	Rod..	3
Erd.....C6	T, B, Tr.....	6-4½x6	43.35	58-1000	510.7	4.8	3	Det..	4	.....	Sep..	Iron.	Al...	I...	CI...	2.00	.41	Heli...	None..	CI....	.....	.....	1.37x3.94	Rod..	3
Erd.....D6	T, B, Tr.....	6-4½x6	48.60	67-1000	572.5	4.8	3	Det..	4	.....	Sep..	Iron.	Al...	I...	CI...	2.00	.41	Heli...	None..	CI....	.....	.....	1.37x4.18	Rod..	3
Erd.....B4	T, B, Tr.....	4-4 x6	25.60	35-1000	301.6	4.8	3	Det..	4	.....	Sep..	Iron.	Al...	I...	CI...	2.00	.41	Heli...	None..	CI....	.....	.....	1.37x3.69	Rod..	3
Erd.....C4	T, B, Tr.....	4-4½x6	28.90	39-1000	340.4	4.8	3	Det..	4	No...	Sep..	Iron.	Al...	I...	CI...	2.00	.41	Heli...	None..	CI....	.....	.....	1.37x3.94	Rod..	3
Erd.....D4	T, B, Tr.....	4-4½x6	32.40	44-1000	381.7	4.8	3	Det..	4	.....	Sep..	Iron.	Al...	I...	CI...	2.00	.41	Heli...	None..	CI....	.....	.....	1.37x4.19	Rod..	3
EWC.....HDC	T, Tr & B.....	4-4¾x6	36.10	55-1200	425.3	....	4	Det..	1	No...	Sep..	Iron.	Iron.	L...	CI...	1.87	.38†	Heli...	None..	CI....	5.87	110.4	1.25x4.25	Rod..	3
EWC.....HDL	T, Tr & B.....	4-5x 6	40.00	61-1400	471.0	....	4	Det..	1	No...	Sep..	Iron.	Iron.	L...	CI...	2.00	.38†	Heli...	None..	CI....	6.25	111.2	1.25x4.62	Rod..	4
EWC.....D	T, Tr & B.....	4-5 x7	40.00	66-1400	550.0	....	4	Det..	1	No...	Sep..	Iron.	Iron.	L...	CI...	2.12	.50†	Heli...	None..	CI....	6.75	128.8	1.44x4.62	Rod..	3
EWC.....HDA	T, Tr & B.....	4-5½x6	44.10	67-1400	519.4	....	4	Det..	1	No...	Sep..	Iron.	Iron.	L...	CI...	2.00	.38†	Heli...	None..	CI....	6.25	112.0	1.25x4.87	Rod..	3
EWC.....DA	T, Tr & B.....	4-5½x7	48.40	76-1400	665.2	....	4	Det..	1	No...	Sep..	Iron.	Iron.	L...	CI...	2.25	.50†	Heli...	None..	CI....	7.00	175.5	1.44x5.06	Rod..	3
Falls.....T8000	Cars.....	6-3⅛x4¼	23.44	46-2750	195.6	4.6	3	Det..	6	No...	Int..	Iron.	PS...	I...	Sil...	1.37	.28†	Heli...	Cam..	CI....	3.50	28.0	.75x2.87	Pist..	4
Gray.....ZC	Cars.....	4-3⅝x4	21.03	21-1500	165.1	....	4*	Det..	4	No...	Int..	Iron.	Iron.	L...	CI...	1.37	.22	Heli...	None..	CI....	3.62	38.0	.74x3.25	Pist..	3
Gray.....VC	Trucks.....	4-3½x5	19.60	31-1800	192.4	....	4*	Det..	4	No...	Int..	Iron.	Iron*	I...	CI...	1.75	.36	Chain.	None..	CI....	3.87	24.0	1.00x2.96	Rod..	3
Hercules.....O & OX	T, B, Tr.....	4-4 x5	25 60	43-2000	251.3	4.0	3	Det..	4	No...	Int..	Iron.	PS...	L...	Car†	1.62	.33	Heli...	None..	CI....	4.87	64.4	1.37x3.50	Pist..	3
Hercules.....MU2	T, B, Tr.....	4-4¼x5½	28.90	46-1700	312.0	4.0	3	Det..	4	No...	Sep..	Iron.	Iron.	L...	Car†	1.87	.33	Heli...	None..	CI....	5.12	81.1	1.25x....	Rod..	4
Hercules.....MU3	T, B, Tr.....	4-4½x5½	32.40	50-1600	349.9	4.0	3	Det..	4	No...	Sep..	Iron.	Iron.	L...	Car†	1.87	.33	Heli...	None..	CI....	5.12	89.2	1.25x....	Rod..	4
Herschell-Spillman...41	C, T, B.....	6-3⅛x5	25.35	55-2200	248.9	4.0	3	Det..	6	No...	Int..	SS...	Iron.	L...	CI...	1.78†	.31	Heli...	Cam..	CI....	3.50	32.0	.87x2.91	Rod..	3
Herschell-Spillman...91	C, T, B.....	6-3½x5	29.40	64-2200	288.6	4.0	3	Det..	6	No...	Int..	SS...	Iron.	L...	CI...	1.78†	.31	Heli...	Cam..	CI....	3.50	36.0	.87x3.16	Rod..	3
Herschell-Spillman...40	C, T, B, Tr....	6-3½x5	25.35	55-2200	248.9	4.0	3	Det..	6	No...	Int..	SS...	Iron.	L...	Car..	1.78†	.31	Heli...	Cam..	CI....	3.50	32.0	.87x2.94	Rod..	3
Herschell-Spillman...90	C, T, B, Tr....	6-3½x5	29.40	64-2200	288.6	4.0	3	Det..	6	No...	Int..	SS...	Iron.	L...	Car..	1.78†	.31	Heli...	Cam..	CI....	3.50	36.0	.87x2.94	Rod..	3
Herschell-Spillman...30	C, T, B, Tr....	4-3½x5	19.60	35-2200	192.4	4.0	3	Det..	4	No...	Int..	SS...	Iron.	L...	CI...	1.56	.31	Heli...	None..	Al*	3.50	36.0	.87x3.18	Rod..	3
Hinkley.....300	T, B, Tr.....	4-3¾x5¼	22.50	37-1700	231.9	3.9	3	Det..	4	No...	Sep..	SS...	PS...	L...	CI...	1.75	.31	Heli...	None..	CI....	4.75	60.0	1.12x1.75	Rod..	3
Hinkley.....400	T, B, Tr.....	4-4 x5¼	25.60	44-1780	263.9	3.9	3	Det..	4	No...	Sep..	SS...	PS...	L...	CI...	1.75	.31	Heli...	None..	CI....	4.50	60.0	1.12x1.75	Rod..	3
Hinkley.....500	T, B, Tr.....	4-4¼x5½	28.90	48-1780	312.0	3.9	3	Det..	4	No...	Sep..	SS...	Al...	L...	CI...	2.00	.31	Heli...	None..	CI....	5.25	81.0	1.25x1.87	Rod..	3
Hinkley.....200	T, B, Tr.....	4-4½x5½	32.40	54-1600	349.9	3.9	3	Det..	4	No...	Sep..	SS...	Al...	L...	CI...	2.00	.31	Heli...	None..	CI....	5.25	92.0	1.25x1.87	Rod..	3
Hinkley.....100	T, B, Tr.....	4-4¾x6	36.10	60-1400	425.3	4.0	3	Det..	2	No...	Sep..	Al...	Al...	L...	CI...	2.12	.31	Heli...	None..	CI....	6.12	105.0	1.37x2.12	Rod..	3
Jackson.....A	Trucks.....	4-4x	28.90	.....	369.7	....	2	Int..	3	No...	Sep..	SS...	Al...	L...	Sil..	.....	.....	Gear...	.....	CI....	.....	.....	.....	Pist..	3
LeRoi.....2C	C, T, Tr.....	4-3⅛x4½	15.63	25-2200	138.1	4.4	3	Det..	4	No...	Int..	Iron.	Iron.	L...	CI...	1.50	.19	Heli...	None..	CI....	3.50	28.0	.75x2.87	Flo...	3
LeRoi.....M	Tractors.....	2-3½x4½	7.80	10-1750	69.0	4.4	4*	Det..	2	No...	Int..	Iron.	Iron.	L...	CI...	1.50	.19	Heli...	None..	CI....	3.50	28.0	.75x2.87	Flo...	3
Light.....H	C, T, Tr.....	4-3¼x4½	16.90	29-2350	149.3	3.9	3	Det..	4	.....	Int..	Iron.	Iron.	L...	CI...	1.19	.36	Heli...	None..	CI....	4.00	30.0	.75x3.00	Rod..	3
Lycoming.....CH	C, T, Tr.....	4-3½x5	19.60	40-2250	192.4	4.1	3	Det..	4	No...	Sep..	Iron.	PS...	L...	CI...	1.62	.34	Heli...	Cran..	Al*..	4.12	24.0	1.12x2.90	Flo...	4
Lycoming.....CF	C, T, Tr.....	4-3⅝x5	21.03	42-2200	206.4	4.1	3	Det..	4	No...	Sep..	Iron.	PS...	L...	CI...	1.62	.34	Heli...	Cran..	Al*..	4.12	26.0	1.12x2.90	Flo...	4
Lycoming.....CT	C, T, Tr.....	4-3¾x5	22.50	44-2150	220.9	4.1	3	Det..	4	No...	Sep..	Iron.	PS...	L...	CI...	1.62	.34	Heli...	Cran..	CI....	4.12	42.0	1.12x3.31	Pist..	4
Lycoming.....H	Cars.....	8-3⅛x4¼	31.25	.....	260.8	4.2	3	Det..	8	No...	Sep..	Iron.	PS...	L...	Sil..	1.31	.31	Chain.	None..	CI....	3.50	25.0	.75x2.78	Pist..	3
Mar Tan.....MAL	Cars.....	2-3⅜x3¾	.....	17-2600	69.9	....	3	Det..	1	No...	Sep..	Al...	Al...	I...	CI...	1.50	.37	Spur..	None..	Al*	.....	.....	.....	.....	2
Matthews.....F	T, Tr.....	4-3½x5	19.60	.....	192.4	....	4*	Det..	4	No...	Int..	Iron.	PS...	I...	CI...	1.37	.25†	Heli...	None..	CI....	3.78	38.0	.87x3.31	Rod..	3
Matthews.....LM	T, Tr.....	4-3⅞x4	24.03	.....	188.7	....	3	Det..	4	No...	Sep..	Iron.	Al...	L...	CI...	1.31	.25	Spur..	None..	CI....	4.25	56.0	.73x....	Rod..	3

ABBREVIATIONS:
Accx—Accessories Drive
Al—Aluminum Alloy
ASt—Alloy Steel
B—Buses
Bro—Bronze
C—Cars
Car—Carbon Steel
Cam—Camshaft
C—Passenger Cars
Cent—Centrifugal
Ch N—Chrome Nickel Steel
Chr—Chromium Steel
Cl—Cast Iron
Det—Detachable
Dur—Duralumin
Ecc—Eccentric
Fl Pr—Full Pressure to all bearings including wrist pins
Flo—Floating
Heli—Helical
I—Both valves in head
H—Valves horizontal in head
Int—Integral
L—Valves at side

Engine Specifications

CONNECTING RODS			CRANKSHAFT							OILING SYSTEM		WATER CIRCULATION		GOVERNOR			MISCELLANEOUS						MAKE AND MODEL
Material	Center to Center Length (Ins.)	Weight (With Bushings and Cap) Ozs.	Material	Offset (Ins.)	Counter Balances Used?	Crank Pin Diameter and Length (Ins.)	Main Bearings Number	Main Bearings Diameter and Length (Ins.) Front	Main Bearings Diameter and Length (Ins.) Rear	Type of System	Pump Type	Type	Pump Type	Equipment	Type	Maximum Governed Speed (R.P.M.)	Speed at Which Maximum Torque Is Developed (R.P.M.)	Weight (without Carburetor or Ignition) Lbs.	Adapted for Use of Kerosene?	Overall Dimensions (Ins.) Width	Overall Dimensions (Ins.) Height	Overall Dimensions (Ins.) Length	Bell Housing Provided? S.A.E. Numbers	
Car...	8.50	.....	Car...	None..	No....	2.25x1.50	3	1.75x2.50	2.37x3.37	FlPr....	Gear..	Pump...	Cent..	NP...	None..	None..	1000	600	No...	28¾	31⅞	41⅞	3*	Ansted.....M
Car...	9.19	.....	Car...	None..	No...	2.25x1.50	3	1.75x2.50	2.37x3.37	FlPr....	Gear..	Pump...	Cent..	NP...	None..	None..	800	675	No...	28¾	31⅞	41⅞	3*	Ansted.....F
Car...	14.00	144.0	Car...	None..	No...	2.25x2.75	5	2.25x4.75	2.25x4.00	Splash...	Gear..	Pump...	Cent..	Stk...	Cent..	Opt...	400	1600	Yes...	22	35½	58¾	None..	Automatic.....J
Car...	14.00	144.0	Car...	None..	No...	2.25x2.75	5	2.25x4.75	2.25x4.00	Splash...	Gear..	Pump...	Cent..	Stk...	Cent..	Opt...	400	1650	Yes...	85¾	19½	35½	None..	Automatic.....J5½
Car...	17.00	240.0	Car...	None..	No...	2.75x3.00	5	2.75x6.75	2.75x5.00	Splash...	Gear..	Pump...	Cent..	Stk...	Cent..	Opt...	400	2700	Yes...	26	43	70¼	None..	Automatic.....M
Car...	19.00	496.0	Car...	None..	No...	3.00x3.50	5	3.00x7.00	3.00x6.00	Splash...	Gear..	Pump...	Cent..	Stk...	Cent..	Opt...	325	3750	Yes...	30	48	78¾	None..	Automatic.....N
Car...	21.00	728.0	Car...	None..	No...	3.50x4.25	5	3.50x6.50	3.50x5.12	Splash...	Gear..	Pump...	Cent..	Stk...	Cent..	Opt...	300	4700	Yes...	32	53½	86½	None..	Automatic.....R
Car...	12.50	139.0	ASt...	.50	No....	2.25x2.75	4	2.37x3.50	2.37x4.50	PrCs....	Gear..	Pump...	Cent..	Opt...	None..	.....	800	1475	No...	23½	39	65	1, 2	Beaver.....JD
Car...	12.50	139.0	Car...	.50	No....	2.25x2.75	3	2.37x3.50	2.37x4.50	PrCs....	Gear..	Pump...	Cent..	Opt...	None..	.....	800	1020	No...	23½	39	50	2*	Beaver.....JC
Car...	12.50	139.0	Car...	.....	No....	2.25x2.75	3	2.37x3.50	2.37x4.50	PrCs....	Gear..	Pump...	Cent..	.....	None..	.....	750	1020	Yes...	23½	39	50	2	Beaver.....JB
Car...	12.50	129.0	Car...	.50	No....	2.25x2.75	3	2.37x3.50	2.37x3.50	PrCs....	Gear..	Pump...	Cent..	Opt...	None..	.....	700	1000	Yes...	23½	39	50	2, 3	Beaver.....JA
ASt...	11.25	57.2	ASt...	None...	No...	1.87x2.00	3	2.12x2.50	2.50x2.94	PrCs....	Gear..	Pump...	Cent..	Opt...	None..	1450	700	645	No...	25¾	32¾	52⅛	3	Buda.....MU
ASt...	11.25	57.2	ASt...	None...	No...	1.87x2.00	3	2.12x2.50	2.50x2.94	PrCs....	Gear..	Pump...	Cent..	Opt...	None..	1450	1000	660	No...	25¾	32¾	52⅛	3	Buda.....WTU
ASt...	11.25	92.2	ASt...	None...	Yes...	2.00x2.25	3	2.25x2.87	2.50x3.44	PrCs....	Gear..	Pump...	Cent..	Opt...	None..	.....	.....	780	No...	25¾	33⅞	55⅛	3	Buda.....CBU
ASt...	11.25	92.2	ASt...	None...	Yes...	2.00x2.25	3	2.25x2.87	2.50x3.44	PrCs....	Gear..	Pump...	Cent..	Opt...	None..	.....	.....	785	No...	25¾	33⅞	55⅛	3	Buda.....GBU
ASt...	11.25	89.0	ASt...	None...	No...	2.00x2.25	3	1.87x2.87	2.12x3.50	PrCs....	Gear..	Pump...	Cent..	Opt...	None..	1150	1000	775	No...	25¾	32¹¹⁄₁₆	55⅛	3	Buda.....CTU
ASt...	11.25	89.0	ASt...	None...	No...	2.00x2.25	3	1.87x2.87	2.12x3.50	PrCs....	Gear..	Pump...	Cent..	Opt...	None..	1150	900	782	No...	25¾	32⅝	55⅛	3	Buda.....GTU
ASt...	12.25	120.0	ASt...	None...	Yes...	2.12x2.50	3	2.25x3.09	2.75x3.94	PrCs....	Gear..	Pump...	Cent..	Opt...	None..	1400	1200	930	No...	25¾	34⅝	58¼	3	Buda.....EBU
ASt...	12.25	113.0	ASt...	None...	No...	2.12x2.50	3	2.12x3.09	2.37x4.00	PrCs....	Gear..	Pump...	Cent..	Opt...	None..	1100	900	925	No...	25¾	34⅛	58¼	3	Buda.....ETU
ASt...	13.25	148.2	ASt...	None...	Yes...	2.25x3.00	3	2.25x3.94	2.75x4.44	PrCs....	Gear..	Pump...	Cent..	Opt...	None..	1250	1100	935	No...	25¾	37⅞	65¼	3	Buda.....YBU
ASt...	13.25	133.7	ASt...	None...	No...	2.25x3.00	3	2.12x3.50	2.37x4.50	PrCc....	Gear..	Pump...	Cent..	Opt...	None..	1000	850	1060	No...	25¾	37½	65¼	3	Buda.....YTU
ASt...	13.25	133.7	ASt...	None...	No...	2.25x3.00	3	2.12x3.50	2.37x4.50	PrCs....	Gear..	Pump...	Cent..	Opt...	None..	1000	850	1055	No...	25¾	37½	65¼	3	Buda.....XTU
ASt...	14.37	163.0	ASt...	None...	No...	2.50x3.12	3	2.25x4.12	2.62x4.75	PrCs....	Gear..	Pump...	Cent..	Opt...	None..	925	675	1410	No...	28¾	41⅜	70⅝	1	Buda.....BTU
ASt...	14.37	163.0	ASt...	None...	No...	2.50x3.12	3	2.25x4.12	2.62x4.75	PrCs....	Gear..	Pump...	Cent..	Opt...	None..	925	700	1400	No...	28¾	41⅜	70⅝	1	Buda.....ATU
Car...	10.25	48.0	Car...	None...	No...	1.87x2.12	3	2.18x2.87	2.25x3.00	Splash...	Pist...	ThS*...	Cent..	Opt...	Cent..	1500	1000	530	Yes...	25¾	32½	39½	Opt...	Buffalo.....BA
Car...	12.94	109.0	Car...	.87	No....	2.12x3.25	3	2.12x3.69	2.12x5.25	PrCs....	Ecc...	Pump...	Cent..	Opt...	Cent..	1000	600	1100	Yes...	25½	35½	50¼	None..	Buffalo.....RT
Car...	13.25	123.0	Car...	.87	No....	2.25x3.25	3	2.37x4.50	2.37x4.87	PrCs....	Gear..	Pump...	Vane*	Opt...	Cent..	1000	700	1600	Yes...	33	43	51¼	None..	Buffalo.....CT
Car...	17.75	232.0	Car...	1.00	No....	2.75x4.00	3	2.75x5.50	2.75x5.87	PrCs....	Gear..	Pump...	Gear..	Opt...	Cent..	900	575	2400	Yes...	41¾	54¼	56½	None..	Buffalo.....CE
ASt...	13.00	110.0	ASt...	None...	No...	2.25x3.00	3	2.19x3.75	2.31x4.37	PrCs....	Ecc...	Pump...	Cent..	Stk...	Cent..	1200	900	1100	Yes...	26¼	39¾	45⅞	1,2*	Climax.....K, KU, KL
ASt...	16.00	220.0	ASt...	None...	Yes...	3.00x3.00	4	3.25x3.66	3.25x4.50	PrCs....	Ecc...	Pump...	Cent..	Stk...	Cent..	1800	650	2400	No...	13½	46	72⅞	1	Climax.....R-6
ASt...	14.00	179.0	ASt...	None...	No...	2.50x3.50	3	2.50x3.75	2.50x4.50	PrCs....	Ecc...	Pump...	Cent..	Stk...	Cent..	1200	650	1550	Yes...	28	43⅞	51¼	1*	Climax.....T & TU
Car...	8.25	32.0	Car...	None...	No...	2.00x1.27	4	2.00x1.44	2.00x2.31	PrCs....	Gear..	Pump...	Cent..	NP...	None..	.....	800	470	No...	24½	27⅝	38⅜	4	Continental.....7U
Car...	10.50	52.0	Car...	None...	No...	2.25x1.56	4	2.25x2.31	2.25x2.81	PrCs....	Gear..	Pump...	Cent..	NP...	None..	.....	800	580	No...	24½	30⅞	40⅛	3	Continental.....8R
Car...	10.50	40.0	Car...	None...	No...	2.25x1.56	4	2.25x2.31	2.25x2.81	PrCs....	Gear..	Pump...	Cent..	NP...	None..	.....	700	600	No...	24½	30¾	40⅛	3	Continental.....6M
Car...	11.00	51.0	Car...	None...	No...	2.37x1.87	4	2.37x2.41	2.37x3.06	PrCs....	Gear..	Pump...	Cent..	NP...	None..	.....	700	700	No...	24½	32	43	3	Continental.....6T
Car...	11.00	50.0	Car...	None...	No...	2.37x1.87	4	2.37x2.41	2.37x3.06	PrCs....	Gear..	Pump...	Cent..	NP...	None..	.....	800	700	No...	24½	34	46¾	3	Continental.....6B
Car...	10.25	57.2	Car...	None...	No...	1.87x2.18	3	2.18x3.12	2.25x3.28	SpPr...	Ecc...	Pump*	Cent..	Opt...	None..	1300	800	475	No...	24½	....	42⅜	Spec..	Continental.....N
Car...	11.00	78.0	Car...	None...	No...	2.00x2.18	3	2.25x2.25	2.25x2.62	FlPr....	Gear..	Pump...	Cent..	Opt...	None..	1400	600	590	No...	24½	25	34¼	3	Continental.....J4
Car...	11.50	57.2	Car...	None...	No...	2.12x2.37	3	2.25x2.62	2.25x2.75	FlPr....	Gear..	Pump...	Cent..	Opt...	None..	1300	700	680	No...	24½	26¾	37⅞	2	Continental.....K4
Car...	12.00	136.0	Car...	None...	No...	2.25x2.62	3	2.25x3.00	2.25x3.25	FlPr....	Gear..	Pump...	Cent..	Opt...	None..	1200	600	807	No...	24½	37⅜	40⅞	2	Continental.....L4
Car...	13.25	136.0	Car...	None...	No...	2.62x3.00	3	2.37x3.39	2.62x3.69	FlPr....	Gear..	Pump...	Cent..	Opt...	None..	1100	700	1000	No...	26¾	40¾	46⅜	1	Continental.....B5
ASt...	12.00	.....	Car...	None...	Opt...	2.50x2.37	3	2.50x3.00	2.50x4.25	FlPr....	Gear..	Pump...	Cent..	Opt...	Opt...	1000	800	.....	Yes...	25¾	38½	38½	2, 3	Erd.....B6
ASt...		.....	Car...	None...	Opt...	2.50x2.37	4	2.50x3.00	2.50x4.25	FlPr....	Gear..	Pump...	Cent..	Opt..	Opt...	1000	800	.....	Yes...	25¾	38½	38½	2, 3	Erd.....C6
ASt...	12.00	.....	Car...	None...	Opt...	2.50x2.37	4	2.50x3.00	2.50x4.25	FlPr....	Gear..	Pump...	Cent..	Opt...	Opt...	1000	800	.....	Yes...	25¾	38½	38½	2, 3	Erd.....D6
ASt...	12.00	.....	Car...	None...	Opt...	2.50x2.37	3	2.50x3.00	2.50x3.37	FlPr....	Gear..	Pump...	Cent..	Opt...	Opt...	1000	800	.....	Yes...	25¾	38½	38½	2, 3	Erd.....B4
ASt...	12.00	.....	Car...	None...	Opt...	2.50x2.37	3	2.50x3.00	2.50x3.37	FlPr....	Gear..	Pump...	Cent..	Opt...	Opt...	1000	800	.....	Yes...	25¾	38½	38½	2, 3	Erd.....C4
ASt...	12.00	.....	Car...	None...	Opt...	2.50x2.37	3	2.50x3.00	2.50x3.37	FlPr....	Gear..	Pump...	Cent..	Opt...	Opt...	1000	800	.....	Yes...	25¾	38½	38½	2, 3	Erd.....D4
Car...	10.00	112.0	Car...	.44	No....	2.00x2.44	5	2.25x3.44	2.25x3.62	PrCs*...	Gear..	Pump...	Cent..	Stk...	Cent..	1200	650	1180	Yes...	24¼	35¼	42¾	Opt...	EWC.....HDC
Car...	12.00	128.0	Car...	.56	No....	2.00x2.44	5	2.25x3.44	2.25x3.62	PrCs*...	Gear..	Pump...	Cent..	Stk...	Cent..	1200	700	1180	Yes...	24¼	37¼	42¾	Opt...	EWC.....HDL
Car...	14.00	182.7	Car...	None...	No....	2.50x3.00	5	2.50x3.00	2.62x4.00	PrCs....	Gear..	Pump...	Cent..	Stk...	Cent..	1000	700	1500	Yes...	29¼	58½	52¾	Opt...	EWC.....D
Car...	12.00	128.0	Car...	.56	No....	2.00x2.44	5	2.25x3.44	2.25x3.62	PrCs....	Gear..	Pump...	Cent..	Stk...	Cent..	1200	700	1200	Yes...	24¼	37¼	42¾	Opt...	EWC.....HDA
Car...	14.00	182.7	Car...	None...	No....	2.50x3.00	5	2.50x3.00	2.62x4.00	PrCs....	Gear..	Pump...	Cent..	Stk...	Cent..	1000	700	1500	Yes...	29¼	58½	52¾	Opt...	EWC.....DA
Car...	8.12	32.5	Car...	None...	No....	2.06x1.62	3	2.25x2.59	2.22x3.00	SpPr...	Gear..	ThS....	None..	NP...	None..	.....	850	495	No...	27¾	27	39	3, 4	Falls.....T8000
Car...	7.00	40.0	Car...	.....	No....	1.50x1.50	3	1.50x2.25	1.50x2.62	Splash...	None..	Pump...	Gear..	NP...	None..	.....	.....	275	No...	20¾	13½	28	Opt...	Gray.....ZC
Car...	11.00	44.0	Car...	.....	No....	2.00x1.87	3	2.00x2.50	2.12x3.37	SpPr...	Gear..	ThS*...	Gear..	None..	None..	.....	.....	425	No...	27⅝	24¾	33¼	3, 4	Gray.....VC
Car...	9.50	60.0	Car...	None...	No....	2.00x2.25	3	2.00x2.94	2.00x3.31	PrCs....	Gear..	Pump*...	Cent..	Opt...	None..	1500	1000	605	Yes...	25⅞	28¼	37⅜	2, 3	Hercules.....O & OX
Car...	12.00	95.6	Car...	None...	No....	2.00x2.25	5	2.00x2.81	2.00x4.37	FlPr....	Gear..	Pump...	Cent..	Opt...	None..	1200	800	850	No...	25¾	41	43⅝	1, 2	Hercules.....MU2
Car...	12.00	95.6	Car...	None...	No....	2.00x2.50	5	2.00x2.81	2.00x4.37	FlPr....	Gear..	Pump...	Cent..	Opt...	None..	1200	800	850	No...	25¾	41	43⅝	1, 2	Hercules.....MU3
Car...	11.00	56.0	ASt...	None...	No....	2.00x1.69	7	2.12x2.37	2.12x2.81	PrCs....	Gear..	Pump...	Cent..	Opt...	None..	.....	1300	610	No...	24⅞	30½	41⅛	3*	Herschell-Spillman...41
Car...	11.00	56.0	ASt...	None...	No....	2.00x1.69	7	2.12x2.37	2.12x2.81	PrCs....	Gear..	Pump...	Cent..	Opt...	None..	.....	1300	610	No...	24⅞	30½	41⅛	3*	Herschell-Spillman...91
Car...	11.00	56.0	ASt...	None...	No....	2.00x2.00	3	2.12x3.50	2.12x4.00	SpPr....	Gear..	Pump...	Cent..	Opt...	None..	.....	900	600	No...	25½	30⅛	44	3	Herschell-Spillman...40
Car...	11.00	56.0	ASt...	None...	No....	2.00x2.00	3	2.12x3.50	2.12x4.00	SpPr....	Gear..	Pump...	Cent..	Opt...	None..	.....	900	620	No...	25½	30⅛	44	3	Herschell-Spillman...90
Car...	11.00	56.0	Car...	None...	No....	2.00x2.00	2	2.00x4.00	2.00x4.00	SpPr....	Gear..	ThS....	None..	Opt...	None..	.....	900	430	Yes...	25½	31	35½	3, 5*	Herschell-Spillman...30
Car...	11.50	98.0	ASt...	None...	No....	2.12x2.25	3	2.12x2.25	2.25x3.00	PrCs....	Gear..	Pump...	Cent..	Opt...	Cent..	1750	775	734	Yes...	25¾	36	37¼	3	Hinkley.....300
Car...	11.50	98.0	ASt...	None...	No....	2.12x2.25	3	2.12x2.25	2.25x3.00	PrCs....	Gear..	Pump...	Cent..	Opt...	Cent..	1750	1100	739	Yes...	25¾	36	37¼	3	Hinkley.....400
Car...	12.00	119.0	ASt...	None...	No....	2.25x2.50	3	2.25x2.50	2.37x3.50	PrCs....	Gear..	Pump...	Cent..	Opt...	Cent..	1650	950	884	Yes...	25¾	40	44	2	Hinkley.....500
Car...	12.00	119.0	ASt...	None...	No....	2.25x2.50	3	2.25x2.50	2.37x3.00	PrCs....	Gear..	Pump...	Cent..	Opt...	Cent..	1600	900	896	Yes...	25¾	40	44	2	Hinkley.....200
Car...	13.50	136.0	ASt...	None...	No....	2.37x3.00	3	2.37x3.00	2.50x4.00	PrCs....	Gear..	Pump...	Cent..	Stk...	Cent..	1450	700	1010	No...	28	41	47	1	Hinkley.....100
.....	.....	.....	Chr...	.....	Yes...	.....	3	2.37x3.00	2.37x3.50	PrCs....	Gear..	Pump...	Cent..	Stk...	.....	.....	.....	900	Yes...	...	...	...	2	Jackson.....A
Car...	8.00	36.0	Car...	None...	Yes...	1.75x2.00	2	1.75x2.75	1.75x2.75	SpPr....	Pist..	ThS....	None..	Opt...	Cent..	1600	1200	.....	.....	15	24	28	2, 3, 4*	LeRoi.....2C
Car...	8.00	36.0	Car...	None...	Yes...	1.75x2.00	2	1.75x2.75	1.75x2.75	SpPr....	Pist..	ThS....	None..	Opt...	Cent..	1600	1100	.....	.....	17	22	22	Opt...	LeRoi.....M
Car...	9.00	43.0	Car...	None...	No....	1.75x2.00	2	1.87x2.37	1.87x2.75	Splash...	Pist..	ThS....	None..	Opt...	Cent..	2000	1000	400	No...	26⅞	30	41½	2,3,4,5	Light.....H
Car...	12.00	50.0	Car...	None...	No....	2.12x1.81	5	2.12x2.62	2.12x2.62	PrCs....	Gear..	ThS....	None..	NP...	None..	.....	1200	495	No...	20⅜	30¾	41⅝	3, 5	Lycoming.....CH
Car...	12.00	50.0	Car...	None...	No....	2.12x1.81	5	2.12x2.62	2.12x2.62	PrCs....	Gear..	ThS....	None..	NP...	None..	.....	1200	505	No...	20⅜	30¾	41⅝	3, 5	Lycoming.....CF
Car...	12.00	50.0	Car...	None...	No....	2.12x1.81	5	2.12x2.62	2.12x2.62	PrCs....	Gear..	ThS....	None..	NP...	None..	.....	1200	515	No...	20⅜	30¾	41⅝	3, 5	Lycoming.....CT
Car...	9.00	37.0	Car...	None...	No....	2.12x1.50	5	2.37x2.68	2.37x2.68	PrCs....	Gear..	Pump...	Cent..	NP...	None[.	.....	.....	.....	No ..	25¾	26⅝	50 1/16	3	Lycoming.....H
ASt...		.....	ASt...	None...	Yes...	.....	2	.....	.....	Splash...	Ecc...	ThS....	None..	NP...	None..	.....	2000	82	No...	18	23½	16	5	Mar Tan.....MAL
Car...	9.25	49.0	Car...	.37	No....	1.75x2.00	3	2.00x2.75	2.00x3.37	Splash..	Gear..	ThS*...	Cent..	Stk...	Cent..	1200	900	445	.....	27	29⅝	34⅞	3	Matthews.....F
Car...	.....	32.0	Car...	None...	No....	1.25x....	3	1.25x....	1.25x....	Splash...	Gear..	ThS....	None..	NP...	None..	.....	2300	.....	.....	...	...	...	5	Matthews.....LM

Mag—Magnesium
NP—No provision
Opt—Optional
Pist—Piston
PrCs—Pressure to all crankshaft and connecting rod bearings, splash ed to other parts

PS—Pressed Steel
Rail C—Rail Cars
Sep—Separate
Sil—Silcrome Steel
Sl—Sleeve
Spec—Special
SS—Semi Steel

SpPr—Pressure to main crankshaft bearings only; splashed to connecting rods and other parts
St—Steel
Stk—Standard Equipment
T—Trucks
Th—Valves opposite

ThS—Thermo-siphon
Tr—Tractors
Tun—Tungeten
*—Optional
†—Inlet valve only
‡—Pressure to all main crankshaft and camshaft bearings

American Stock Engine

MAKE AND MODEL	Designed For	Number of Cylinders, Bore and Stroke (Ins.)	Rated H.P. (N.A.C.C.)	R.P.M. at Maximum Brake H.P.	Piston Displacement (Cu. Ins.)	Compression Ratio	Number of Point Suspension	CYLINDERS: Head	CYLINDERS: No. Cast in One Piece	CYLINDERS: Detachable Liners Used?	CRANKCASE: Upper Half: Integral with Cylinders?	CRANKCASE: Upper Half: Material	CRANKCASE: Material (Lower Half)	VALVE ARRANGEMENT: Arrangement	VALVE ARRANGEMENT: Material	VALVE ARRANGEMENT: C'lear Diameter (Ins.)	VALVE ARRANGEMENT: Lift (Ins.)	FRONT END DRIVE: Type	FRONT END DRIVE: Non-Metallic Gear Used On?	PISTONS: Head Material	PISTONS: Length (Ins.)	PISTONS: Weight (with Pins, Rings & Bushings) Ozs.	PISTONS: Piston Pins: Diameter and Length (Ins.)	PISTONS: Piston Pins: Pin Bearing (Ins.)	PISTONS: Number of Rings per Piston
Niagara	C, Tr.	4-2¾x4	12.10	15–1600	95.03	....	3	Det..	4	No...	Int..	Iron.	Iron.	L...	CI...	1.18	.25	Spur..	None..	CI....	3.00	20.0	.62x2.50	Flo..	3
Northway 80	Trucks	4-3½x5½	19.60	34–1800	211.6	....	3	Det..	1	Yes..	Int..	Iron.	.....	L...	Chr..	1.56	.39	Heli...	None..	CI....	4.56	49.5	1.10x3.19	Rod..	4
Northway 84	Trucks	4-4 x5½	25.60	46–1600	276.5	....	3	Det..	1	Yes..	Int..	Iron.	.....	L...	Chr..	1.87	.39	Heli...	None..	CI....	5.25	70.6	1.23x3.68	Rod..	4
Northway 88	Trucks	4-4½x6	32.40	52–1500	381.7	....	3	Det..	1	Yes..	Int..	Iron.	.....	L...	Chr..	2.25	.44	Heli...	None..	CI....	5.72	93.5	1.29x4.19	Rod..	4
Northway 311	Cars	8-3½x4½	39.20	76–2600	346.3	....	3	Det..	4	No...	Int..	Iron.	PS...	L...	Chr..	1.50	.31	Heli...	Cam..	Al....	4.37	28.0	.86x3.31	Rod..	4
Reliable 10-20	Tractors	2-6 x7	.....	22–600	.....	5.0	3	Det..	2	.....	Sep..	SS...	Iron.	I...	CI...	.....	.....	Spur..	None..	CI....	.....	.....	.....	Pist..	3
Rochester G1	Cars	4-4¼x6	28.90	78–2400	340.4	4.7	3	Int..	4	.....	Sep..	Al...	Al...	H...	Tun.	2.00	.48	Chain	None.	AL...	4.75	43.5	1.25x3.75	Pist..	3
Rochester 100	Cars	6-3½x5	29.40	65–2400	288.6	4.5	3	Det..	6	.....	Sep..	Al...	Al...	L...	Cart.	.....	.....	Heli...	Cam..	Al....	4.00	23.5	.....	Pist..	3
Rochester 101	Cars	6-3¾x5	33.75	84–2400	331.4	4.5	3	Det..	6	.....	Sep..	Al...	Al...	I...	Cart.	.....	.....	Heli...	Cam..	Al....	4.00	23.5	.....	Pist..	3
Rutenber 25	Cars	6-3½x5	23.44	45–2400	230.0	....	3	Det..	6	No...	Int..	Iron.	PS...	L...	CI...	1.31	.31	Heli...	Cam..	CI....	3.75	25.0	.75x2.81	Rod..	4
Stearns HU & H	Buses & Tr.	4-4½x6	32.40	55–1250	381.7	4.5	3*	Det..	4	No...	Sep..	Iron.	Al...	I...	Tun†	.....	.37	Heli...	None..	CI*..	5.75	.....	1.50x4.00	Rod..	3*
Stearns AR & A	Tractors	4-4¾x6½	36.10	70–1250	460.7	5.0	3	Det..	4	No...	Sep..	Iron.	Iron.	I...	Tun†	2.25	.37	Heli...	None.	Mag..	6.47	.....	1.62x4.25	Rod..	4
Stearns DU & D	Tractors	4-5½x6½	42.03	80–1250	536.4	4.5	3*	Det..	4	No...	Sep..	Iron.	Iron.	I...	Tun†	2.25	.37	Heli...	None.	CI*..	6.00	.....	1.62x4.62	Rod..	4*
Stearns EU & E	Tractors	4-5½x6⅛	48.40	90–1250	582.0	4.5	3*	Int..	2	No...	Sep..	Iron.	Iron.	I...	Tun†	.....	.37	Heli...	None.	CI*..	6.19	.....	1.62x5.00	Rod..	3*
Turmo N	C, T, B, Tr.	4-3 x4½	14.40	23–2000	127.2	4.0	3	Int..	4	No...	Sep..	Iron.	PS...	L...	CI...	1.50	.31	Heli...	None.	CI....	3.25	23.5	.75x2.75	Pist..	3
Turmo S	C, T, B, Tr.	4-3½x5	19.60	47–2000	192.4	4.0	3	Det..	4	Yes..	Sep..	SS...	PS...	L...	CI...	1.62	.31	Heli...	None.	SS....	3.75	36.5	.87x3.25	Pist..	3
Turmo H	C, T, B, Tr.	4-3¾x5	22.50	47–2000	220.9	4.0	3	Int..	4	Yes..	Sep..	SS...	PS...	L...	CI...	1.75	.37	Heli...	None.	SS....	4.00	46.0	1.00x3.50	Pist..	3
Twin City TW	T & Tr.	4-4¼x6	28.90	45–1300	340.4	3.7	3*	Det..	4	Yes..	Int..	Iron.	Iron.	I...	CI...	1.50	.31	Heli...	None.	CI....	5.19	73.0	1.25x3.87	Rod..	4
Twin City TL	Tractors	4-5 x7½	40.00	45–850	589.0	3.4	4	Det..	4	Yes..	Sep..	Iron.	Iron.	L...	CI...	2.25	.41	Heli...	None.	CI....	6.12	150.0	1.44x4.62	Rod..	5
Twin City AE	Tractors	4-5½x6¾	48.40	90–1500	641.4	3.5	4	Int..	4	Yes..	Int..	Iron.	Iron.	L...	CI...	1.75	.44	Heli...	None.	CI....	6.75	170.0	1.62x5.12	Rod..	4
Twin City TR	Tractors	4-6¼x8	62.50	66–750	981.7	3.5	4	Det..	2	No...	Sep..	Iron.	Iron.	L...	CI...	2.50	.57	Heli...	None.	CI....	7.75	290.0	1.87x5.50	Rod..	4
Twin City TA	Tractors	4-7¼x9	90.0	84–650	1486.0	4.0	4	Det..	1	No...	Sep..	Iron.	Iron.	L...	CI...	3.00	.69	Heli...	None.	CI....	10.00	526.0	2.19x6.75	Rod..	4
Twin City BE	Tractors	4-7¾x9	96.10	96–650	1698.3	3.5	4	Det..	1	No...	Sep..	Iron.	Iron.	I...	CI...	3.00	.69	Heli...	None.	CI....	10.25	582.0	2.19x7.25	Rod..	4
Waukesha Z	T, Tr.	4-3¼x4½	16.90	24–2000	149.3	4.5	3	Det..	4	No...	Int..	Iron.	PS...	L...	CI...	1.37	.25	Heli...	None.	CI....	3.69	31.2	.75x2.94	Pist..	3
Waukesha CU	Buses	4-3⅞x5¾	30.63	53–1900	205.8	4.5	3	Det..	2	No...	Sep..	Al...	Iron	L...	Sil...	2.00	.34	Heli...	None.	Al....	6.19	51.0	1.25x3.75	Pist..	6
				42–1400		3.7							Al..							CI....	5.56	100.0	1.25x3.75	Pist..	3
Waukesha YA	T, B, Tr.	4-3¾x5¼	22.50	38–1800	231.9	4.1	3	Det..	4	Yes..	Int..	Iron.	PS...	L...	Sil...	1.62	.31	Heli...	None.	CI....	4.59	47.7	1.00x3.25	Flo..	4
						4.5														Al....	4.84	35.0	1.00x3.25	Flo..	6
Waukesha Y	T, B, Tr.	4-4 x5¼	25.60	43–1800	263.9	3.9	3	Det..	4	Yes..	Int..	Iron.	PS...	L...	Sil...	1.62	.31	Heli...	None.	CI....	4.59	49.0	1.00x3.50	Flo..	4
						4.5														Al....	4.84	38.7	1.00x3.50	Flo..	6
Waukesha FU	T, B, Tr.	4-4 x5¾	25.60	37–1400	289.0	3.7	3	Det..	2	No...	Sep..	Al...	Iron.	L...	Sil...	2.00	.34	Heli...	None.	CI....	5.56	89.0	1.25x3.37	Pist..	3
						4.5														Al....	5.84	44.0	1.25x3.37	Pist..	6
Waukesha DU	T, B, Tr.	4-4½x6¼	32.40	50–1400	397.6	3.7	3	Det..	2	No...	Sep..	Al...	Iron.	L...	Car..	2.12	.34	Heli...	None.	CI....	5.87	120.0	1.37x3.87	Pist..	3
						4.5														Al....	6.09	.....	1.37x3.87	Pist..	6
Waukesha EU	T, Tr.	4-5 x6¼	40.00	60–1400	490.8	3.7	3	Det..	2	No...	Sep..	Al...	Iron.	L...	Car..	2.12	.34	Heli...	None.	CI....	6.50	141.0	1.37x4.44	Pist..	3
Weidely R	Cars	6-3¼x5	25.35	63–3000	248.9	4.6	3	Det..	6	No...	Int..	SS...	Al...	I...	CI*..	.....	.....	Chain	None.	CI....	3.75	27.0	.87x3.00	Rod..	3
Weidely RS	Cars	6-3⅝x5	27.34	67–3000	268.4	4.6	3	Det..	6	No...	Int..	SS...	Al...	I...	CI*..	.....	.....	Chain	None.	CI....	3.75	20.0	.87x3.12	Rod..	3
W-S-Morgan C4,A4,A4R	T, B, Tr.	4-4¾x6	36.10	60–1100	425.3	4.0	3	Int..	4	Yes..	Int..	SS...	Iron*	I...	CI*..	2.31	.33	Heli...	None.	SS....	6.12	104.0	1.37x4.44	Rod..	3
Wisconsin SU	T, Tr.	4-4 x5	25.60	50–2000	251.3	....	3	Det..	4	No...	Int..	Iron.	PS...	I...	ChN.	1.50	.27	Heli...	None.	CI....	4.25	54.7	1.03x4.00	Pist..	3
Wisconsin TAU	C, T, B, Tr.	4-4 x6	25.60	46–1600	301.6	....	3	Det..	4	.....	Sep..	Al...	Al...	L...	ChN.	2.03	.31	Heli...	None.	CI....	5.37	65.0	1.19x3.62	Rod..	3
Wisconsin UAU	C, T, B, Tr.	4-4¼x6	28.90	51–1600	340.4	....	3	Det..	4	.....	Sep..	Al...	Al...	L...	ChN.	2.03	.31	Heli...	None.	CI....	5.12	75.0	1.19x3.87	Rod..	3
Wisconsin VAU	C, T, B, Tr.	4-4½x6	32.40	54–1600	381.7	....	3	Det..	4	.....	Sep..	Al...	Al...	L...	ChN.	2.03	.31	Heli...	None.	CI....	4.94	82.0	1.19x4.12	Rod..	3
Wisconsin NU	C, T, B, Tr.	4-4¼x5	28.90	42–1800	283.6	....	3	Det..	4	.....	Sep..	Al...	Al...	L...	ChN	1.72	.28	Heli...	None.	CI....	4.56	52.0	1.18x3.69	Rod..	3
Wisconsin RAU	C, T, B, Tr.	4-4¾x6	36.10	61–1600	425.3	....	3	Det..	2	.....	Sep..	Al...	Al...	L...	ChN.	2.12	.34	Heli...	None.	CI....	6.12	99.0	1.37x4.31	Rod..	3
Wisconsin RBU	C, T, B, Tr.	4-5 x6	40.00	64–1600	471.2	....	3	Det..	2	.....	Sep..	Al...	Al...	L...	ChN.	2.12	.34	Heli...	None.	CI....	5.91	109.0	1.37x4.56	Rod..	3
Wisconsin M	T, B, Tr.	4-5¾x7	52.90	92–1350	727.1	....	4	Int..	2	.....	Sep..	Al...	Al...	T...	ChN.	2.81	.37	Heli...	None.	CI....	6.50	154.0	1.44x4.81	.....	4
Wisconsin P	T, B, Tr.	6-5¾x7	79.35	125–1350	1090.6	....	4	Int..	2	.....	Sep..	Bro..	Al...	T...	ChN.	2.81	.37	Heli...	None.	CI....	6.50	154.0	1.44x4.81	.....	4
Yellow-Sleeve Z	Buses	4-4 x6	25.60	56–2000	301.6	4.6	3*	Det..	4	No...	Sep..	Al...	Al...	Sl...	CI....	.....	.....	Chain	None.	Al....	5.17	48.0	1.25x3.62	Pist..	3

ABBREVIATIONS:
Accx—Accessories Drive
Al—Aluminum Alloy
ASt—Alloy Steel
B—Buses
Bro—Bronze
C—Cars
Car—Carbon Steel
Cam—Camshaft
C—Passenger Cars
Cent—Centrifugal
Ch N—Chrome Nickel Steel
Chr—Chromium Steel
CI—Cast Iron
Det—Detachable
Dur—Duraluminum
Ecc—Eccentric
Fl Pr—Full Pressure to all bearings including wrist pins
Flo—Floating
Heli—Helical
I—Both valves in head
H—Valves horizontal in head
Int—Integral
L—Valves at side

American Stock Steering

MAKE & MODEL	Designed For	CAPACITY: For Vehicle Gross Weight (Lbs.)	CAPACITY: For Maximum Weight On Front Wheels (Lbs.)	Type	Gear Ratio	OUTSIDE DIAMETERS: Steering Gear (Ins.)	OUTSIDE DIAMETERS: Wheel Shaft (Ins.)	OUTSIDE DIAMETERS: Column Jacket (Ins.)	STEERING ARM: Center to Center Length (Ins.)	STEERING ARM: Maximum Angular Motion (Deg.)	MATERIALS: Housing	MATERIALS: Reduction Gear	MATERIALS: Nut or Cam	MATERIALS: Gear Shaft S.A.E. No.	MATERIALS: Wheel Spider	Adjustable for Wear?	BEARINGS: Thrust: Type	BEARINGS: Thrust: Number	BEARINGS: Thrust: Make	BEARINGS: Thrust: Diameter (Ins.)	BEARINGS: Thrust: Length (Ins.)	BEARINGS: Gear Shaft: Type	BEARINGS: Gear Shaft: Number	BEARINGS: Gear Shaft: Make	BEARINGS: Gear Shaft: Diameter (Ins.)	BEARINGS: Gear Shaft: Length (Ins.)	CONTROL LEVERS: Location	CONTROL LEVERS: Type	Adapted for Right Hand Drive?	Weight Complete (Lbs.)
C.A.S.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ditwiler M	T&B.	Var...	Var.	W&W.	8½	Var.	Var.	Var.	Opt.	Var.	Mal...	.....	.....	1020	.....	Yes.	Ball...	2	.....	Var.	Var.	None..	0	None..	0	0	BW.	Qua.	No..	Var.
Ditwiler FA	Cars	3000	Var.	W&W.	7½	Var.	Var.	Var.	Opt.	Var.	Mal...	.....	.....	1020	.....	Yes.	Ball...	2	.....	Var.	Var.	None..	0	None..	0	0	AW.	SL.	No..	Var.
Ditwiler H	Cars	4000	Var.	W&W.	8½†	Var.	Var.	Var.	Opt.	Var.	Mal...	.....	.....	1020	.....	Yes.	Ball...	2	.....	Var.	Var.	None..	0	None..	0	0	AW.	SL.	No..	Var.
Ditwiler D	Cars	5000	Var.	W&W.	9½†	Var.	Var.	Var.	Opt.	Var.	Mal...	.....	.....	1020	.....	Yes.	Ball...	2	.....	Var.	Var.	None..	0	None..	0	0	AW.	SL.	No..	Var.
Gemmer	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jacox 1A	Cars	Var...	Var.	S&N..	9½	17	1	1½	9½†	70	Mal...	1025	Bro.	1035	AL‡	Yes.	Ball...	1	Nice..	1⅞	5/8	Plain..	3	B-B..	1⅜	1⅜	Opt.	Opt.	Yes.	25†
Jacox 2A	Cars	Var...	Var.	S&N..	12	18	1⅛	1¾	7	70	Mal...	1025	Bro.	1035	CI‡	Yes.	Ball...	1	Nice..	2	11/16	Plain..	3	B-B..	1½	1⅜	Opt.	Opt.	Yes.	33
Jacox 10C	B&T.	Var...	Var.	S&N..	14	20	1 1/16	2	9½†	70	Mal...	1025	Bro.	1035	Wo‡	Yes.	Ball...	1	Nice..	2½	1 1/16	Plain..	3	B-B..	1⅞	1⅝	Opt.	Opt.	Yes.	65
Jones R	C T B&Tr.	3600	Var.	S&N..	9	Opt.	1	1¾	9†	85	Mal...	.....	S S..	1045	Opt.	Yes.	Rod..	2	Shaf..	2½	¾	Plain..	2	Bunt..	.....	.....	Opt.	Qua.	No..	40
Lavine X	T B&Tr.	5000	25%	S&N..	12	Opt.	1 1/16	1¾†	Opt	72	Mal...	.....	St..	Spec	Opt.	Yes.	None..	0	None..	0	0	Plain..	2	Own..	Var.	Var.	Opt.	Opt.	Yes.	Var.
Lavine Y	T B&Tr.	10000	25%	S&N..	13	Opt.	1⅝	2	Opt	72	Mal...	.....	St..	Spec	Opt.	Yes.	None..	0	None..	0	0	Plain..	2	Own..	Var.	Var.	Opt.	Opt.	Yes.	Var.
Lavine Z	T B&Tr.	15000	25%	S&N..	14½	Opt.	1⅝	2	Opt	72	Mal...	.....	St..	Spec	Opt.	Yes.	None..	0	None..	0	0	Plain..	2	Own..	Var.	Var.	Opt.	Opt.	Yes.	Var.

ABBREVIATIONS:
Al—Aluminum
AW—Above Wheel
B—Buses
B-B—Bound Brook
B&P—Ball and Plain
Bro—Bronze
Bunt—Bunting
BW—Below Wheel
C—Cars
C&L—Cam and Lever
CI—Cast Iron
Hel—Helical
Mal—Malleable
Opt—Optional

Specifications (Continued)

CONNECTING RODS			CRANKSHAFT								OILING SYSTEM		WATER CIRCULATION		GOVERNOR			MISCELLANEOUS							MAKE AND MODEL
Material	Center to Center Length (Ins.)	Weight (With Bushings and Cap) Ozs.	Material	Offset (Ins.)	Counter Balances Used?	Crank Pin Diameter and Length (Ins.)	Main Bearings Number	Main Bearings Diameter and Length (Ins.) Front	Main Bearings Diameter and Length (Ins.) Rear		Type of System	Pump Type	Type	Pump Type	Equipment	Type	Maximum Governed Speed (R.P.M.)	Speed at Which Maximum Torque Is Developed (R.P.M.)	Weight (without Carburetor or Ignition) Lbs.	Adapted for Use of Kerosene	Overall Dimensions (Ins.) Width	Overall Dimensions (Ins.) Height	Overall Dimensions (Ins.) Length	Bell Housing Provided? S.A.E. Numbers	
Car..	7.50	25.0	Car...	None...	No...	1.44x1.75	2	1.44x2.75	1.44x2.38		SpPr...	Pist...	Pump...	Gear..	Opt...	.....	.....	.....	250	Yes...	11	18¾	37¾	.....	Niagara
Car..	11.00	58.0	Car...	None...	No...	2.00x2.25	3	2.12x2.94	2.25x2.72		FlPr...	Gear..	Pump...	Cent..	Stk...	Cent..	1700	1000	632	No...	24¾	34⅝	44⅞	Opt...	Northway	80
Car..	11.00	81.0	Car...	None...	No...	2.12x2.25	3	2.12x2.75	2.25x3.41		FlPr...	Gear..	Pump...	Cent..	Stk...	Cent..	1500	1000	733	No...	24¾	35¾	51⅛	Opt...	Northway	84
Car..	12.00	100.0	Car...	None...	No...	2.37x2.87	3	2.25x3.69	2.37x3.81		FlPr...	Gear..	Pump...	Cent..	Stk...	Cent..	1260	1100	892	No...	23⅜	38 1/16	45¾	Opt...	Northway	88
Car..	9.50	31.0	Car...	None...	Yes...	2.12x2.50	3	2.00x3.06	2.12x3.72		PrCs...	Gear..	Pump...	Cent..	NP...	None..	.....	.....	821	No...	26⅝	28½	38⅜	No...	Northway	311
Pist...			ASt...	None...	No...	3.00x3.00	2	3.00x5.00	3.00x5.00		FlPr...	Ecc...	Pump...	Cent..	Stk...	Cent..	600	600	1000	Yes...					Reliable	10-20
Pist...	12.00	64.0	Car...	.75	Yes...	2.31x2.50	2	2.31x4.00	2.31x4.31		PrCs...	Gear..	Pump...	Cent..	NP...	None..	.....	1400	510	.....	26	35	14¼	3	Rochester	G1
Car..	10.00	44.0	Car...	None...	.....	2.25x1.87	3	2.25x2.69	2.25x3.31		PrCs...	Gear..	Pump...	Cent..	NP...	None..	.....	1100	540	No...	24¼	34	52	3	Rochester	100
Pist...	10.00	44.0	Car...	None...	.....	2.25x1.87	3	2.25x2.69	2.25x3.31		PrCs...	Gear..	Pump...	Cent..	NP...	None..	.....	1100	560	No...	24¼	34	52	3	Rochester	101
Rod...	9.50	45.0	Car...	None...	No...	2.00x1.87	3	2.00x2.75	2.00x3.12		SpPr...	Pist...	Pump...	Vane..	NP...	None..	800	545	.....	No...	26	36	45	3	Rutenber	25
Rod...	12.50	.....	Car...	.50	No...	2.50x3.25	3	2.50x3.50	2.50x4.00		FlPr...	Gear..	Pump...	Cent..	Opt...	.....	.....	.....	.....	.....	.....	.....	.....	3, 2	Stearns	HU & H
Rod...	13.25	.....	Car...	.50	No...	2.75x3.50	3	2.87x3.44	2.87x4.50		FlPr...	Gear..	Pump...	Cent..	Stk...	Cent..	1250	1550	1300	Yes...	23	42¾	53	2	Stearns	AR & A
Rod...	13.25	.....	Car...	.....	No...	2.75x3.50	3	2.12x3.44	2.87x4.50		FlPr...	Gear..	Pump...	Cent..	Opt...	.....	.....	.....	.....	Yes...	.....	.....	.....	1, 2	Stearns	DU & D
Rod...	13.25	.....	Car...	.50	No...	2.75x3.50	3	2.87x3.44	2.87x4.50		FlPr...	Gear..	Pump...	Cent..	Opt...	.....	.....	.....	1375	Yes...	.....	.....	.....	1, 2	Stearns	EU & E
Pist...	10.00	44.0	Car...	None...	No...	2.00x2.00	2	.....	.....		Splash..	Pump.	ThS...	None..	Stk...	Cent..	Opt...	1400	300	No...	24	28	27⅝	4*	Turmo	N
Pist...	10.00	44.5	Car...	None...	No...	2.00x2.00	3	1.87x3.12	2.00x3.25		FlPr...	Gear..	ThS...	None..	Stk...	Cent..	Opt...	1600	465	No...	24	28	35	3*	Turmo	S
Pist...	10.00	44.7	Car...	None...	No...	2.00x2.00	3	1.94x3.12	2.06x3.25		FlPr...	Gear..	Pump...	Cent..	Stk...	Cent..	Opt...	1400	475	No...	24½	28	35	3*	Turmo	H
Car..	12.00	112.0	Car...	None...	Yes...	2.37x2.87	3	2.37x3.06	2.75x4.00		PrCs...	Gear..	Pump...	Cent..	Stk...	Cent..	1500	1000	1040	Yes...	28	38⅜	44¾	2	Twin City	TW
Car..	16.00	165.0	Car...	None...	No...	2.62x2.62	3	2.62x5.50	2.62x5.50		SoPr...	Gear..	Pump...	Cent..	Stk...	Cent..	650	500	1690	Yes...	24½	36¾	50¼	None.	Twin City	TL
Car..	14.00	248.0	Car...	None...	Yes...	3.00x3.62	3	2.87x3.75	3.12x5.75		PrCs...	Gear..	Pump...	Cent..	Stk...	Cent..	1200	600	1800	Yes...	33½	47½	55¾	None.	Twin City	AE
Car..	18.00	317.0	Car...	None...	No...	3.00x3.44	3	3.00x6.12	3.00x6.44		SoPr...	Pist...	Pump...	Cent..	Stk...	Cent..	750	500	2400	Yes...	33⅞	52½	61⅞	None.	Twin City	TR
Car..	20.50	604.0	Car...	None...	No...	3.50x4.37	5	3.50x6.19	3.50x6.69		SoPr...	Pist...	Pump...	Cent..	Stk...	Cent..	650	400	4100	Yes...	40	64	76	None.	Twin City	TA
Car..	20.50	592.0	Car...	None...	No...	3.50x4.37	5	3.50x6.19	3.50x6.69		SpPr...	Pist...	Pump...	Cent..	Stk...	Cent..	650	350	4200	Yes...	40	64	76	None.	Twin City	BE
Car..	8.75	36.7	Car...	.25	No...	2.00x1.50	3	2.00x1.87	2.00x2.50		PrCs...	Ecc...	ThS...	None..	Opt...	Cent..	200	1000	375	Yes...	60¾	28	4⅝	5	Waukesha	Z
Car..	12.25	116.5	ASt...	.25	No...	2.37x2.50	3	2.37x2.50	2.50x3.25		PrCs...	Gear..	Pump...	Vane..	Opt...	Cent..	1600 1400	800 650	840	Yes...	30½	38¾	55½	1, 2	Waukesha	CU
Car..	11.25	72.0	Car...	None...	No...	2.12x2.00	3	2.12x2.00	2.37x2.75		PrCs...	Gear..	ThS*...	Cent..	Opt...	Cent..	1500 1600	1000	650	Yes...	25¾	32⅞	37⅝	3	Waukesha	YV
Car..	11.25	72.0	Car...	None...	No...	2.12x2.00	3	2.12x2.00	2.37x2.75		PrCs...	Gear..	ThS*...	Cent..	Opt...	Cent..	1500 1600	1000	650	Yes...	25¾	33⅞	37⅝	3	Waukesha	YA
Car..	12.25	116.5	ASt...	.25	No...	2.37x2.50	3	2.37x2.50	2.50x3.25		PrCs...	Gear..	Pump...	Vane..	Stk...	Cent..	1400 1600	1000 800	825 910	Yes...	30½	38¾	55½	1, 2	Waukesha	FU
Car..	13.25	122.0	ASt...	.25	No...	2.37x2.75	3	2.37x2.75	2.50x3.50		PrCs...	Gear..	Pump...	Vane..	Stk...	Cent..	1200 1400	650 800	1000 1000	Yes...	30½	40½	58	1, 2	Waukesha	DU
Car..	13.25	140.0	ASt...	.50	No...	2.37x3.25	3	2.37x3.25	2.50x4.00		PrCs...	Gear..	Pump...	Vane..	Stk...	Cent..	1200	650	1050	Yes...	30½	40½	62	1, 2	Waukesha	EU
Car..	11.00	53.0	ASt...	None...	No...	2.37x1.55	3	2.12x2.25	2.37x3.00		PrCs...	Gear..	Pump...	Vane..	NP...	.....	.....	.....	.....	No...	.....	.....	.....	3	Weidely	R
Car..	11.00	55.0	ASt...	None...	No...	2.37x1.50	3	2.12x2.25	2.37x3.00		PrCs...	Gear..	Pump...	Vane..	NP...	.....	.....	.....	.....	No...	.....	.....	.....	3	Weidely	RS
Car..	13.25	140.0	ASt...	None...	No...	2.37x2.69	3	2.50x2.87	2.50x3.69		FlPr...	Gear..	Pump...	Cent..	Stk...	Cent..	Opt...	900	1250	Yes...	25¾	40½	48½	2	W-S-Morgan	C4,A4,A4R
ASt...	10.50	56.0	ASt...	None...	.....	2.00x2.00	3	1.94x2.50	2.06x3.00		PrCs...	Gear..	Pump...	Cent..	Opt...	None..	1600	1000	635	No...	22	31½	35⅞	3	Wisconsin	SU
Car..	12.00	99.0	ASt...	.....	No...	2.00x3.00	4	2.00x2.50	2.00x3.50		PrCs...	Gear..	Pump...	Cent..	Opt...	None..	.....	.....	700	No...	21½	34¾	46½	3	Wisconsin	TAU
Car..	12.00	99.0	ASt...	.....	No...	2.00x3.00	4	2.00x2.50	2.00x3.50		PrCs...	Gear..	Pump...	Cent..	Opt...	None..	.....	.....	715	No...	21½	34¾	46½	3	Wisconsin	UAU
Car..	12.00	99.0	ASt...	.....	No...	2.00x3.00	4	2.00x2.50	2.00x3.50		PrCs...	Gear..	Pump...	Cent..	Opt...	None..	.....	.....	725	No...	21½	34¾	46½	3	Wisconsin	VAU
Car..	10.50	64.0	ASt...	.....	No...	2.12x2.25	3	2.12x2.75	2.25x4.00		PrCs...	Gear..	Pump...	Cent..	Opt...	None..	.....	.....	575	No...	20½	33½	40¾	3	Wisconsin	NU
Car..	12.50	121.0	ASt...	.....	No...	2.25x3.00	3	2.25x3.00	2.37x4.00		PrCs...	Gear..	Pump...	Cent..	Opt...	None..	.....	.....	890	No...	23⅞	36¼	48¾	3	Wisconsin	RAU
Car..	12.50	121.0	ASt...	.....	No...	2.25x3.00	3	2.25x3.00	2.37x4.00		PrCs...	Gear..	Pump...	Cent..	Opt...	None..	.....	.....	900	No...	23⅞	36¼	48¾	3	Wisconsin	RBU
Car..	14.00	144.0	ASt...	.....	No...	2.37x3.50	3	2.37x4.00	2.37x6.00		PrCs...	Gear..	Pump...	Cent..	Opt...	None..	.....	.....	900	No...	28½	27¾	51¾	No...	Wisconsin	M
Car..	14.00	144.0	Car...	.....	No...	2.62x3.50	4	2.62x3.87	2.62x5.75		PrCs...	Gear..	Pump...	Cent..	Opt...	None..	.....	.....	1700	No...	28½	40	70⅞	No...	Wisconsin	P
Car...	13.37	92.0	Car...	.31	Yes...	2.37x2.37	3	3.00x2.50	3.00x3.94		PrCs...	Gear..	ThS...	None..	NP...	None..	.....	.....	994	No...	32¼	38	61⅛	Opt...	Yellow-Sleeve	Z

Mag—Magnesium
NP—No provision
Opt—Optional
Pist—Piston
PrCs—Pressure to all crankshaft and connecting rod bearings, splash to other parts

PS—Pressed Steel
Rail C—Rail Cars
Sep—Separate
Sil—Silicrome Steel
Sl—Sleeve
Spec—Special
SS—Semi Steel

SpPr—Pressure to main crank shaft bearings only, splash to connecting rods and other parts
St—Steel
Stk—Standard Equipment
T—Trucks
Th—Valves opposite

ThS—Thermos-siphon
Tr—Tractors
Tun—Tungsten
*—Optional
†—Inlet valve only
‡—Pressure to all main crankshaft and camshaft bearings

Gear Specifications

MAKE & MODEL	Designed For	CAPACITY For Vehicle Gross Weight (Lbs.)	CAPACITY For Maximum Weight On Front Wheels (Lbs.)	Type	Gear Ratio	OUTSIDE DIAMETERS Steering Gear (Ins.)	OUTSIDE DIAMETERS Wheel Shaft (Ins.)	OUTSIDE DIAMETERS Column Jacket (Ins.)	STEERING ARM Center to Center Length (Ins.)	STEERING ARM Maximum Angular Motion (Deg.)	MATERIALS Housing	MATERIALS Reduction Gear	MATERIALS Nut or Cam	MATERIALS Gear Shaft S.A.E. No.	MATERIALS Wheel Spider	Adjustable for Wear?	BEARINGS Thrust Type	BEARINGS Thrust Number	BEARINGS Thrust Make	BEARINGS Thrust Diameter (Ins.)	BEARINGS Thrust Length (Ins.)	BEARINGS Gear Shaft Type	BEARINGS Gear Shaft Number	BEARINGS Gear Shaft Make	BEARINGS Gear Shaft Diameter (Ins.)	BEARINGS Gear Shaft Length (Ins.)	CONTROL LEVERS Location	CONTROL LEVERS Type	Adapted for Right Hand Drive?	Weight Complete (Lbs.)
Lavine.....S1700	T B&Tr...	7000	25%	S&N..	11	Opt.	1⅞	1¾	Opt.	74	Mal...	.....	St..	Spec	Opt.	Yes.	None..	0	None..	0	0	Plain..	2	Own..	Var.	Var.	Opt.	Opt.	Yes.	Var.
Lavine.....2100	C T B&Tr.	Var...	Var.	S&N..	9⅜	Opt.	.....	.....	Opt.	Var.	Mal...	.....	St..	Spec	Opt.	Yes.	Ball...	1	.....	Var.	Var.	Plain..	2	.....	.....	.....	Opt.	Opt.	Yes.	.....
Muncie.....551400	Cars.....	2400	1400	Hel...	7½	Opt.	¾	1½	6 5/16	360	Mal...	Spec	Spec	Spec	NF.	Yes.	B&P†	.....	.....	.....	.....	Plain..	2	.....	1	1¾	NF.	NF.	Yes.	16½
Reos.....BA	Trucks....	2000	Var.	S&N..	9	18	1	1½	Opt.	90	Mal...	1020	Bro.	3120	Opt.	No..	Ball...	2	Own..	Var.	Var.	Plain..	...	Own..	Var.	Var.	BW.	Qua.	Yes.	Var.
Reos.....BB	Trucks....	5000	Var.	S&N..	9	18	1	1½	Opt.	90	Mal...	1020	Bro.	3120	Opt.	No..	Ball...	2	Own..	Var.	Var.	Plain..	...	Own..	Var.	Var.	BW.	Qua.	Yes.	Var.
Reos.....BF	Trucks....	14000	Var.	S&N..	12	22	1⅜	1¾	Opt.	90	Mal...	1020	Bro.	3120	Opt.	No..	Ball...	2	Own..	Var.	Var.	Plain..	...	Own..	Var.	Var.	BW.	Qua.	Yes.	Var.
Reos.....BL	T&B.....	5000	Var.	S&N..	12	18	1	1¾	Opt.	60	Mal...	1020	1040	3120	Opt.	No..	Ball...	2	Own..	Var.	Var.	Plain..	...	Own..	Var.	Var.	Opt.	Qua.	Yes.	Var.
Reos.....BM	T&B.....	6000	Var.	S&N..	15	22	1⅛	2¼	Opt.	60	Mal...	1020	1040	3120	Opt.	No..	Ball...	2	Own..	Var.	Var.	Plain..	...	Own..	Var.	Var.	Opt.	Qua.	Yes.	Var.
Reos.....C	C&T.....	3200	Var.	C&L..	Var.	18	1⅛	1¾	Opt.	70	Mal...	1020	1020	....	Opt.	Yes.	Ball...	2	Own..	Var.	Var.	Plain..	...	Own..	Var.	Var.	AW.	SL..	Yes.	Var.
Reos.....E	CT&B	3200	Var.	C&L..	Var.	18	1⅛	1¾	Opt.	70	Mal...	1020	1020	....	Opt.	Yes.	Ball...	2	Own..	Var.	Var.	Plain..	...	Own..	Var.	Var.	Opt.	SL..	Yes.	Var.
Reos.....H&S	T&B.....	6000	Var.	C&L..	Var.	18	1⅛	1¾	Opt.	70	Mal...	3120	1020	....	Opt.	Yes.	Ball...	2	Own..	Var.	Var.	Plain..	...	Own..	Var.	Var.	Opt.	SL..	Yes.	Var.
Reos.....I&T	T&B.....	7000	Var.	C&L..	Var.	22	1⅛	2¼	Opt.	70	Mal...	3120	1020	....	Opt.	Yes.	Ball...	2	Own..	Var.	Var.	Plain..	...	Own..	Var.	Var.	Opt.	SL..	Yes.	Var.
Reos.....O	Cars.....	2800	Var.	C&L..	Var.	18	1⅛	1¾	Opt.	70	Mal...	1020	1020	....	Opt.	Yes.	Ball...	2	Own..	Var.	Var.	Plain..	...	Own..	Var.	Var.	AW.	SL..	Yes.	Var.
Weldrab....1-2-3-4-5	T B&Tr...	15000	5000	Pla...	12†	22†	1¼	1¾†	Opt.	72	CI...	St..	St..	1020	Mal.	Yes.	None..	0	None..	0	0	None..	0	None..	0	0	Opt.	Opt.	Yes.	Var.

Pla—Planetary
Qua—Quadrant
Shaf—Shafer

S&N—Screw and Nut
SL—Short Levers
Spec—Special

SS—Semi Steel
St—Steel
T—Trucks

Tr—Tractors
Var—Varies
W&W—Worm and Wheel

Wo—Wood
†—Varies
‡—Material Optional

American Stock

MAKE AND MODEL	Designed For	Maximum Torque of Clutch With Which Engine Can Be Used (Lbs. ft.)	Maximum Torque Capacity of Clutch When New (Lbs. ft.)	Recommended Ratio of Max. Torque Cap. of Clutch to Max. Torque of Engine	Type	Dry or in Oil	Facing Material	Maximum Coefficient of Friction	Thickness of Each Facing (Ins.)	Mean Radius of Each Friction Face (Ins.)	DIAMETER OF FACING		Number of Wearing Faces of Friction Material	Area of Each Friction Face (Sq.Ins.)	No. of Driving Members	No. of Driven Members	Shaft Material (S.A.E. No.)	Disk or Plate Material
											Maximum (Ins.)	Minimum (Ins.)						
Ansted	Cars	200	475	.....	M.D.	Dry	Mo.C.	.05	.12	.....	8.62	6.53	21	498.00†	5	6	2330	Cr.St.
Borg & Beck 9-KP	Cars	120	180	1.50	S.P.	Dry	Wo.F.	.30	.12	3.75	8.87	6.12	2	32.40	2	1	.....	Steel
Borg & Beck DX	Cars	150	250	1.50	S.P.	Dry	Wo.F.	.30	.12	4.15	9.87	6.75	4	40.00	2	1	.....	Cast I.
Borg & Beck FGX	T&B	200	300	1.50	S.P.	Dry	Wo.F.	.30	.12	4.78	11.87	7.25	2	69.50	2	1	.....	Steel
Borg & Beck GX	Trucks	200	300	1.50	S.P.	Dry	Wo.F.	.30	.12	5.03	11.87	8.25	4	57.00	2	1	None	Cast I.
Borg & Beck RGS	T&B	200	300	1.50	S.P.	Dry	Wo.F.	.30	.12	4.78	11.87	7.25	4	69.50	2	1	3140	Cast I.
Borg & Beck FJX	T&B	300	450	1.50	S.P.	Dry	Wo.F.	.30	.12	5.40	13.87	7.75	2	104.00	2	1	.....	Steel
Brown-Lipe 65	T&B	.....	.....	.....	M.D.	Dry	Mo.C.	.....	.18	3.87	9.25	6.25	26	25.00	13	13	2320	Steel
Brown-Lipe 70	T&B	.....	.....	.....	M.D.	Dry	Mo.C.	.....	.18	3.87	9.25	6.25	28	25.00	14	14	2320	Steel
Brown-Lipe 20	C&T	84	84	.....	M.D.	Dry	Wo.F.	.....	.15	3.65	8.45	6.25	6	25.00	3	3	2320	Steel
Brown-Lipe 30	C&T	125	125	.....	M.D.	Dry	Wo.F.	.....	.15	3.65	8.43	6.25	8	25.00	4	4	2320	Steel
Brown Lipe A	C&T	165	165	.....	S.P.	Dry	Wo.F.	.....	.12	4.18	9.87	6.87	4	40.00	1	2	2320	Steel
Brown-Lipe 35	C, T, B, Tr.	184	184	.....	M.D.	Dry	Wo.F.	.....	.15	3.65	8.43	6.25	10	25.00	5	5	2320	Steel
Brown-Lipe 50	C, T, B, Tr.	208	208	.....	M.D.	Dry	Wo.F.	.....	.15	3.65	8.43	6.25	12	25.00	6	6	2320	Steel
Brown-Lipe 55	T, B&Tr.	250	250	.....	M.D.	Dry	Wo.F.	.....	.15	3.65	8.43	6.25	14	25.00	7	7	2320	Steel
Brown-Lipe 60	T, B&Tr.	275	275	.....	M.D.	Dry	Wo.F.	.....	.15	3.65	8.43	6.25	16	25.00	8	8	2320	Steel
Chicago	C, T&Tr.	150	180	5.00	S.P.	Dry	Mo.C.	.....	.18	4.50	10.00	6.00	4	125.67	2	2	Nic.	Cast I.
Cotta Gear 8	T, Tr.	.....	.....	.....	M.D.	Dry	Wo.F.	.....	.12	3.78	9.00	6.12	16	34.20	8	9	2340	Steel
Covert Gear MJUC	C, T&B	122	.....	.....	M.D.	Dry	Mo.C.	.30	.15	3.68	8.25	8.25	10	.....	5	6	2320	.....
Covert DC-9	T&B	190	.....	.....	M.D.	Dry	Mo.C.	.30	.15	3.68	8.25	8.25	18	.....	9	10	2320	.....
Detlaff J	Cars	120*	225	2.50	M.D.	Dry	Wo.F.	.36	.12	2.68	7.87	5.43	6	25.48	3	2	.....	.....
Detlaff M	Cars	200*	500*	2.50	M.D.	Dry	Wo.F.	.36	.15	3.71	8.37	6.50	14*	21.90	7*	7*	.....	.....
Detlaff H	C, T, B&Tr.	450*	.....	2.50	M.D.	Dry	Wo.F.	.36	.15	3.71	8.37	6.50	18*	21.90	9*	9*	2320	Steel
Fuller HCL	T, B&Tr.	300*	.....	.....	M.D.	Dry	Mo.C.	.....	.12	3.50	8.00	6.00	16	.....	8	6	2320	Steel
Fuller JCL	T, B&Tr.	210*	.....	.....	M.D.	Dry	Mo.C.	.....	.15*	3.50	8.00	6.00	16*	.....	8	6	2320	Steel
Hartford M-615	T.	.....	.....	-	Cone	Dry	Lea.	.....	.25	7.75	2.62§	15.75‡	1	130.00	1	1	1035	.....
Hillard XDG	T,B,Tr.	400	800	2.00	M.D.	Dry	Wo.F.	.30	.12	5.00	10.68	6.87	4	54.20	2	2	None	Steel
Hillard S-6	T,B,Tr.	500	1000	2.00	M.D.	Dry	Wo.F.	.30	.12	5.00	12.00	8.00	6	60.00	3	3	None	Steel
Hillard S-8	T,B,Tr.	625	1250	2.00	M.D.	Dry	Wo.F.	.30	.12	5.00	12.00	8.00	8	60.00	4	4	None	Steel
Hoosier K94A	C, T&Tr.	150	300	2.00	S.P.	Dry	Mo.C.	.33	.15	3.68	8.87	5.50	2	38.10	1	1	.....	.....
Hoosier K910A	C,T,B&Tr.	210	440	2.00	M.D.	Dry	Mo.C.	.33	.15	3.68	8.87	5.50	4	38.10	2	2	.....	.....
Long 10-12	Cars	2500*	Var.	.....	M.D.	Dry	Wo.F.	.....	.....	.....	.....	.....	4	.....	2	2	.....	.....
Merchant & Evans 8US	Cars	125	190	1.50	S.P.	Dry	Mo.C.	.30	.12	3.31	7.87	5.37	2	26.00	2	1	2330	Cast I.
Merchant & Evans 10US	C,T&Tr.	2000	3000	1.50	S.P.	Dry	Mo.C.	.30	.12	4.15	9.87	6.75	2	41.00	2	1	2330	Cast I.
M. & E. (Hele Shaw)	C,B&Tr.	2300*	4500*	2.00	M.D.	Oil	None	.10	.....	8.00*	Var.	Var.	32*	33.00	17*	16*	2330	Steel
Muncie Gear K23	C&T	200	185	.....	M.D.	Dry	Wo.F.	.....	.12	3.50	8.00	6.00	12	21.00	6	7	.....	Steel
Rockford 10	C, T&B	.....	200*	.....	S.P.	Opt.	Wo.F.	.40	.15	4.18	9.87	6.87	2	39.46	2	1	.....	1020
Twin Disc 8	Cars	115	170	1.50	S.P.	Dry	Wo.F.	.30	.12	3.34	7.93	5.43	2	52.43	2	1	None	Car.

ABBREVIATIONS:
§—Width of facing
†—Area of all faces
*—Varies according to load
‡—Maximum diameter of cone
Ann B—Annular Ball
Ball T—Ball Thrust
B—Buses
Bell H—Bell Housing
C—Cars
CrSt—Cold rolled steel
Cast I—Cast Iron
Gear T—Gear Teeth
Lea—Leather
M D—Multiple disc

Single Cylinder Motorcycles

ALTHOUGH 32 per cent of British motorcycle models have two-cylinder engines, this proportion gives a false notion of their popularity, for if it were possible to analyze the outputs of all makers, except one, it probably would be found that they consist of something like 90 per cent single cylinder machines. The exception is Douglas who, still a good second in output among British makes, specializes, as hitherto, in two-cylinder horizontally opposed engines. Taking in Douglas the output is 80 per cent single cylinders.

A number of more or less important makers have introduced two-cylinder models for 1924 for the first time, and others have additional models of this type, but that is no indication of any increase in the popularity of two cylinders among users. Rather it shows that still more makers are trying to meet every possible demand.

As regards types of machines, the outstanding development is the ultra-lightweight with an engine of less than 175 c.c. piston displacement. It is a motorcycle as distinct from a motorized cycle, for it is built throughout for self-propulsion and often has a two-speed or three-speed gearset. In a few cases pedalling gear is provided, but even then it has motorcycle characteristics in every other re-

No. of Cylinders	Percentage
One	68
Two	32
Cylinder Arrangement	
Vertical	68
Vee	21
Horizontal	9
Inclined	2
Cycle, Type (all sizes)	
Four	78
Two	22
Cycle, Type (up to 18 cu. in.)	
Four	14
Two	86
Engine Make	
Own	68
J. A. P.	15
Blackburne	7
Sundry	10
Valve Arrangement (four cycle)	
Side	65
Overhead	26
Inlet overhead	7
Overhead camshaft	2
Piston Material	
Aluminum	36
Cast iron	64
Oiling System	
Splash and pressure	59
Splash	31
With fuel	9
Pressure	1
Clutch	
Multi plate	79
Single plate	14

Clutch Specifications

No. of Springs	PRESSURES (Lbs.) Total Spring Pressure	Total Pressure on Friction Face	Pressure per Sq. Ins. of Friction Surface	Pressure Required at Thrust Bearing to Disengage	Min. Travel of Clutch Throwout Bearing to Complete Disengagement (Ins.)	Overall Outside Diameter of Clutch (Ins.)	Type of Throwout Bearing	DRIVE TAKEN BY: From Flywheel to Driving Members of Clutch	DRIVE TAKEN BY: From Driven Members of Clutch to Driving Shaft of Clutch	Means of Adjustment	Multiplying Levers or Togg'es Used?	Is Clutch Brake Provided?	Sold With Gearset?	Adapted for Use With	Bell Housing (S. A. E.) Nos.)	Weight (Lbs.)	MAKE AND MODEL
3	255	585	27.6	33	.34	9 11/64	Plain	Gear T.		Sp.B.	Yes	Yes	No	Opt	3	23	Ansted
1	300	1000	30.0	300	.25	10 1/8	Ball T.	Pins	Splines	S.C.P.	Yes	No	No	Bell H.	3, 4, 5.	17	Borg & Beck 9-KP
1	225	1800	45.0	250	.43	11 1/4	Ball T.	Pins	Splines	S.C.P.	Yes	Yes	No	Bell H.	3, 4, 5.	26	Borg & Beck DX
1	275	2200	31.6	300	.50	13 3/8	Ann B.	Pins	Splines	S.C.P.	Yes	Yes	No	Bell H.	1, 2, 3.	37	Borg & Beck FGX
1	275	2200	35.5	300	.50	13 3/8	Ball T.	Pins	Splines	S.C.P.	Yes	Yes	No	Bell H.	1, 2, 3.	34	Borg & Beck GX
1	275	2200	31.6	300	.50	13 3/8	Ball T.	Pins	Splines	S.C.P.	Yes	Yes	No	Opt.	None	52	Borg & Beck RGS
1	275	2200	21.0	300	.37	15 1/2	Ann.B.	Keys	Splines	S.C.P.	Yes	Yes	No	Bell H.	1, 2	54 1/2	Borg & Beck FJX
2	330	330	13.0	330	.31	9 3/4	Ball T.	Gear T.	Keys	Sp.B.	No	Yes	Opt.	Bell H.	1, 2, 3.		Brown-Lipe 65
2	330	330	13.0	330	.31	9 3/4	Ball T.	Gear T.	Keys	Sp.B.	No	Yes	Opt.	Bell H.	1, 2, 3.		Brown-Lipe 70
2	330	330	13.0	330	.18	9 15/64	Ball T.	Gear T.	Keys	Sp.B.	No	Yes	Opt.	Bell H.	3, 4.		Brown-Lipe 20
2	330	330	13.0	330	.18	9 15/64	Ball T.	Gear T.	Keys	Sp.B.	No	Yes	Opt.	Bell H.	2, 3, 4.		Brown-Lipe 30
1	285	1995	50.0	285	.50		Ball T.	Pins	Splines	Th.R.	Yes	Yes	Opt.	Bell H.	2, 3, 4.		Brown-Lipe A
2	330	330	13.0	330	.25	9 15/64	Ball T.	Gear T.	Keys	Sp.B.	No	Yes	Opt.	Bell H.	2, 3, 4.		Brown-Lipe 35
2	330	330	13.0	330	.25	9 15/64	Ball T.	Gear T.	Keys	Sp.B.	No	Yes	Opt.	Bell H.	2, 3.		Brown-Lipe 50
2	330	330	13.0	330	.31	9 15/64	Ball T.	Gear T.	Keys	Sp.B.	No	Yes	Opt.	Bell H.	1, 2, 3.		Brown-Lipe 55
2	330	330	13.0	330	.31	9 15/64	Ball T.	Gear T.	Keys	Sp.B.	No	Yes	Opt.	Bell H.	1, 2, 3.		Brown-Lipe 60
3	150	1500	31.5	150	.31	11	Ball T.	Keys	Splines	Th.R.	Yes	No	Opt.	Bell H.	1, 2, 3.	40	Chicago
1	700	700	20.5	700	.12	11 1/2	Ann.B.	Gear T.	Splines	Th.R.	Yes	No	No	Opt.		73	Cotta Gear 8
3	387				.37	11 1/2	Ann.B.	Gear T.	Gear T.	Sp.B.	No	Yes	Yes	Opt.	1, 2, 3, 4.		Covert Gear MJUC
3	342				.37	11 3/4	Ann.B.	Gear T.	Gear T.	Sp.B.	No	Yes	No	Bell H.	1, 2, 3.		Covert DC-9
3	345		2.2		.12	10	Ann.B.	Pins	Pins	Sp.B.	No	Yes	No			15	Detlaff J
3	375*		1.2*		.25	11 1/2	Ann.B.	Gear T.	Gear T.	None		No	No			33*	Detlaff M
3	450*		2.8*		.25	11 1/2	Ann.B.	Gear T.	Gear T.	Sp.B.	No	Yes	No	Bell H.	1, 2, 3, 4.	55*	Detlaff H
1	450	450		450	.37*		Ann.B.	Gear T.	Pins	None	No	No	Opt.	Bell H.	1, 2, 3.		Fuller HCL
1	350	350		350	.37*		Ann.B.	Gear T.	Pins	None	No	No	Opt.	Bell H.	1, 2, 3, 4.		Fuller JCL
1	300	1360	10.5	300	.50	15 3/4	Ball T.	Cone	Uni.J.	Sp.B.	No	No	No	Open F.	None	40	Hartford M-615 1/4
1	375	1875	12.0	375	.50	13 3/8	Ann.B.	Gear T.	Gear T.	S.C.P.	Yes	Yes	No	Opt.	2, 3.	62	Hillard XDC
1	375	1875	16.0	375	.50	15 1/2	Ann.B.	Gear T.	Gear T.	S.C.P.	Yes	Yes	No	Opt.		117	Hillard S-6
1	375	1875	23.0	375	.50	15 1/2	Ann.B.	Gear T.	Gear T.	S.C.P.	Yes	Yes	No	Open F.	None	124	Hillard S-8
1	250	1190	31.0	250	.25	10 7/8	Ball T.	Pins	Splines	None	Yes	No	No	Opt.		15	Hoosier K94A
1	250	1190	31.0	250	.37	10 7/8	Ball T.	Pins	Splines	None	Yes	No	No			19	Hoosier K910A
6	Var.	Var.	Var.	Var.	Var.		Ball T.	Pins	Splines	S.C.P.	Yes		No				Long 10-12
6	1200	1200	46.0	185	.37	9 1/4	Ball T.	Pins	Splines	S.C.P.	Yes	No	No	Bell H.	1, 6.	14	Merchant & Evans. 8US
6	1200	1200	29.0	150	.37	11 1/4	Ball T.	Pins	Splines	S.C.P.	Yes	No	No	Bell H.	1, 2, 3, 4.		Merchant & Evans. 10US
1	800*	800*	73.0*	800*	.62	21 1/2*	Ann.B.	Splines	Splines	None	No	Yes	No	Open F.	None		M. & E. (Hele Shaw)
1	350	350	1.5	500	.25	11 1/2	Ball T.	Keys		Sp.B.	No	Yes	Opt.	Bell H.	1, 2, 3, 4, 5.	37 1/2	Muncie Gear K23
12	1200	1200	30.4	161	.37	11 1/4		Pins	Splines	S.C.P.	Yes	No	No	Opt.	2, 3, 4.	18	Rockford 10
1	220	1012	19.0	220	.15	8	Ball T.	Pins	Splines	None	Yes	No	No	Opt.			Twin Disc 8

Mo C—Molded composition
Nic—Nickel steel
Open F—Open Flywheel

Opt—Optional
SCP—Screws on Cover Plate
S P—Single Plate
Sp B—Spring Bolts

T—Trucks
Tr—Tractors
Th R—Threaded Ring

Uni J—Universal Joint
Var—Varies
Wo F—Woven Fabric

Dominate Field in England

spect, including a special frame. It is a type which has "caught on" with a certain section of the public who otherwise would not have bought a motorcycle at all, its chief attractions being its relatively low price, low weight and low running costs. Almost invariably it has a two-cycle engine which in a few instances is rated as low as 1 hp., on the basis of an official formula which is slowly becoming recognized, viz., 100 c.c. = 1 hp.

Four-cycle engines are regaining some of their lost popularity taking motorcycles of all sizes, comprising now 78 per cent as compared with 68 per cent at this time last year. But for sizes below 18 cu. in., the two-cycle has gained still further, being found on 86 per cent of machines. More makers are producing their own engines, the use of stock models having fallen from 48 to 32 per cent in twelve months. A similar trend is to be seen in gearsets which are 54 per cent stock patterns as compared with 64 per cent last year, though both in these and in engines the proportions were approximately the same in 1920.

	Percentage
Cylinder Head	
Expanding	4
Cone	3
Clutch Control	
Hand	95
Foot	5
Gearset Make	
Own	46
Sturmey Archer	38
Burman	14
Albion	2
No. of Speeds	
Two	14
Three	81
Four	5
Drive	
Chain	82
Chain and belt	17
Belt	1
Frame at Rear	
Rigid	94
Sprung	6
Brakes	
Front:	
Expanding	55
V rim	25
Contracting	8
Rim	12
Rear:	
Expanding	44
V rim	53
Contracting	3
Starting System	
Kick start	94
Push start	5
Hand	1
Lighting System	
None	78
Electric	16
Acetylene	6

American Stock Rear

MAKE AND MODEL	Designed for	Maximum Load on Spring Pads (Lbs.)	Maximum Drive Shaft Torque (Lb. Ft.)	Type	Final Drive	GEAR MATERIALS (S.A.E. Nos.) First Reduction Pinion	First Reduction Gear	Final Reduction Pinion	Final Reduction Gear	GEAR RATIO First Reduction Standard	First Reduction Optional	First Reduction Optional	Final Reduction Standard	Final Reduction Optional	NOMINAL PITCH OF GEARS First Reduction	Final Reduction	FACE OF GEARS First Reduction	Final Reduction	AXLE SHAFT Diameter at Differential End (Ins.)	Diameter at Wheel End (Ins.)	Material S.A.E. No.	RANGE OF SPRING CENTERS Maximum	Minimum	Propulsion Taken By	Torque Taken By	Provision for Radius Rods?
Atlas LC8	T & Bu.	8000		F F	I G	2315	2320	2315	2315	1.55	1.33		6.60	5.60	3.40	4-5	1.25	1.75	1.49	1.49	3340	51	47	Sp	Sp	Yes
Atlas LC12	T & Bu.	12000		F F	I G	2315	2320	2315	2315	1.55	1.33		7.10	6.10	3.40	4-5	1.25	1.75	1.56	1.50	3340	53	49	Sp	Sp	Yes
Clark B306	Trucks	3000	500	½ F	S B	2315	2315	None	None	5.66	5.10	None	None	None	4.25	0	1.25	None	1.50	1.87	3140	40	38½	Sp	Sp	No
Clark 1D	Trucks	4200	524	F F	I G	Car	Car	2320	1020	1.85	2.06	1.95	6.83	7.59	5.00	4.00	1.00	1.12	1.12		3140	39	38	Sp	Sp	No
Clark B-360	Trucks	4500	516	½ F	S B	2315	2315	None	None	6.28	5.50	None	None	None	3.48	None	1.31	None	1.62	2.12	3140	40	38½	Sp	Sp	No
Clark 2-H	Trucks	6500	833	F F	I G	Car	Car	2320	2320	2.17			9.00		4.00	4.00	1.25	1.50	1.50		3140	39½	39½	T A	T A	Yes
Clark 2-D	Trucks	6500	833	F F	I G	Car	Car	2320	1020	1.95	2.17		8.00	9.00	4.00	4.00	1.25	1.62	1.50		3140	39	38½	Sp	Sp	No
Clark B-650	Trucks	7200	833	½ F	S B	2320	2320	None	None	7.00	8.00	None	None	None	3.33	None	1.75	None*	2.06	2.62	3140	39½	38½	Sp	Sp	No
Clark 2-D	Buses	8000	833	F F	I G	Car	Car	2320	1020	1.69	1.95		7.00	8.00	4.00	4.00	1.25	1.50	1.50		3140	50⅝	43	Sp	Sp	No
Clark 3-D	Buses	11000	1416	F F	I G	2315	2315	2320	2320	1.69	1.95		7.00	8.00	4.00	4.00	1.25	1.50	1.50		3140	50½	47½	Sp	Sp	No
Clark 5-H	Trucks	15000	1416	F F	I G	2315	2315	2320	2320	2.79			11.60		4.00	4.00	1.25	1.62	1.62		3140	43½	43½	Sp	Sp	Yes
Clark 3-D	Trucks	11000	1416	F F	I G	2315	2315	2320	2320	2.44	2.79		10.00		4.00	4.00	1.25	1.62	1.50		3140	42½	40	Sp	Sp	No
Clark 3-H	Trucks	11000	1416	F F	I G	2315	2315	2320	2320	2.44	2.79		10.00	11.00	4.00	4.00	1.25	1.62	1.62		3140	43½	43½	Sp	Sp	Yes
Clark 5-D	Trucks	18000	2083	F F	I G	2315	2315	2320	2320	2.44	2.17		12.50	11.17	4.00	4.00	1.25	2.00	1.75		3140	42½	40	Sp	Sp	No
Columbia 12000	Cars	2000		½ F	S B	2320	1020	None	None	5.10			None	None	5.00	None	1.31	None	1.25	1.56	2335	40	37	Sp	Sp	No
Columbia 33000	Cars	2500		½ F	S B	2320	1020	None	None	4.90			None	None	4.40	None	1.31	None	1.31	1.75	2335	40	37	Sp	Sp	No
Columbia 52000	Trucks	4200		¾ F	S B	2320	2320	None	None	5.10	5.80		None	None	3.40	None	1.50	None	1.43	1.43	2335	40	37	Sp	Sp	No
Eaton 750-R	Trucks	1500		½ F	S B	2320	2320	None	None	4.90	4.58		None	None		None		None	1.37	1.75	3140	39½	36	S-A	Sp	No
Eaton 300-R	Cars	3000		½ F	S B	2320	2320	None	None	4.45			None	None		None		None	1.25	1.75	3140	41	37	S-A	Sp	No
Eaton 38-HB	Cars	3200		½ F	S B	2320	2320	None	None	4.45			None	None		None		None	1.25	1.75	3140	41	37	S-A	Sp	No
Eaton 420R	Cars	4200		½ F	S B	2320	2320	None	None	4.90	4.58		None	None		None		None	1.37	1.75	3140	39½	37	S-A	Sp	No
Eaton 1000	Trucks	4400		½ F	S B	2315	2315	None	None	6.14	5.62	5.12	None	None		None		None	1.50	2.00	3140	40½	37½	Sp	Sp	Yes
Eaton 1500-R	Trucks	5500		½ F	S B	2315	2315	None	None	5.62	5.12	6.14	None	None		None		None	1.50	2.00	3140	40½	37½	Sp	Sp	Yes
Eaton 604	Trucks	5000	5000	½ F	Wo	3120	Bro	None	None	9.66	8.33	10.66	None	None		None		None	2.00	2.75	2340	40¾	36	Sp	Sp	No
Eaton (Torb) 7500	Trucks	2700	400	F F	I G	2315	2315	2315	1050	1.83	1.57	2.33	3.43		5.00	5½-7	.87	1.00	1.00	1.18	3140	40¼	37½	Sp	Sp	No
Eaton (Torb) 10000	Trucks	4200	560	F F	I G	2315	2315	2315	1050	2.00	1.79	1.57	4.00		4.50	5½-7	1.00	1.12	1.12	1.18	3140	39¼	37½	Sp	Sp	No
Eaton (Torb) 15000	Trucks	5400	680	F F	I G	2315	2315	2315	1050	1.89	1.52	2.10	4.00		4.50	5-6	1.25	1.25	1.25	1.37	3140	40	36½	Sp	Sp	No
Eaton (Torb) C-3	Trucks	7000	800	F F	I G	2315	2315	2315	1050	1.78	2.00	2.20	4.50		4.00	5½-5	1.12	1.37	1.25	1.37	3140	39	37¾	Sp	Sp	No
Eaton (Torb) 25000	Trucks	7500	840	F F	I G	2315	2315	2315	1050	1.95	1.70	2.17	4.30		4.50	4½-5	1.31	1.62	1.25	1.57	3140	40¼	36⅝	Sp	Sp	No
Eaton (Torb) E3	Trucks	11000	1330	F F	I G	2315	2315	2315	1050	2.11	1.84	2.40	4.84		4.00	4-5	1.37	1.81	1.50	1.96	3140	44	39	Sp	Sp	No
Flint 70-BA-10	T & Bu.	4000	1450	F F	S B	2320	3115	None	None	4.90	5.50	6.00	None	None	4.00	None	1.37	None	1.50	1.50	3135	39½	36	S-A	S-A	No
Huck 25	Trucks			F F	D R	2320	2320	Spec	Spec	1.79	2.05	2.27	7.36	9.31	4.00	6-8	1.25	1.25	1.75	1.75	Spec	40	39	Sp	Sp	No
Huck 50	Trucks			F F	D R	2320	2320	Spec	Spec	2.11	2.38	3.07	9.28	13.50	4.00	5-7	1.50	1.50	2.09	2.09	Spec	46	44¼	Sp	Sp	No
Huck 85	Buses			F F	D R	2320	2320	Spec	Spec	1.39	1.62	1.79	5.72	7.36	4.0	6-8	1.25	1.25	1.75	1.75	Spec	53	47	Sp	Sp	No
L-M 7150	Trucks	5000	500	½ F	D R	3120		None	None				5.10	7.40		None		None	1.75	2.31	3240	50	38	Sp		No
L-M 7250	Trucks	8000	1000	½ F	D R			None	None				5.80	7.44		None		None	2.00	2.56	3240	40	38	Sp		No
L-M 7500	Trucks	15000	1500	½ F	T R			None	None				9.15	11.28		None		None	3.00	3.75	3240	44	42	Sp		Yes
National A	Cars			½ F	Wo			None	None	4.75	5.16	7.00	None	None		None		None	1.75	1.75	3135	41½	37	Sp		No
Penfield 3595	Cars	1800	90	F F	S B	Spec	Spec	None	None	4.55	4.22	4.72	None	None	4.18	None	1.15	None	1.12	1.12	Spec	41	35	S-T	Sp	No
Penfield 3700	Cars	2200	130	½ F	S B	Spec	Spec	None	None	4.80	4.22	4.55	None	None	4.89	None	1.09	None	1.25	1.50	3140	41	38	Sp	Sp	No
Russell 44	Trucks			Dd	I G	2320	2320	3250	1045	1.60	1.33		5.54		3.87	5.00	1.12	1.62	1.37	1.37	3135	40½*	38⅜*	T A	Sp	No
Russell 66	Trucks			Dd	I G	2320	2320	3250	1045	1.60			5.54		3.87	5.00	1.12	1.62	1.37	1.37	3135	40½*	30¾	T A	T A	No
Russell 82	Trucks			Dd	I G	2320	2320	3315	1045	1.59	1.50	1.80	5.82		3.75	4½-6	1.37	1.62	1.50	1.43	3135	40*	38½*	T A	T A	No
Russell 34	Trucks			Dd	I G	2320	2320	3250	1045	1.43			4.92		3.84	6.00	1.00	1.12	1.12	1.18	3135	40¾*	37⅝*	T A	Sp	No
Salisbury A	Cars	2400		¾ F	S B	2320	2320	None	None	4.75	5.00	4.50	None	Nonr	4.43	None	1.37	None	1.37	1.37	3140	41⅜	36½	S-A	S-A	No
Salisbury B	Cars	3000		¾ F	S B	2320	2320	None	None	4.50	4.00	3.50	None	None	3.86	None	1.50	None	1.50	1.50	3140	41½	36½	Sp	Sp	No
Salisbury C	Cars	2100		½ F	S B	2320	2320	None	None	4.75	5.00	None	None	None	4.68	None	1.18	None	1.25	1.50	3140	41⅜	36½	Sp	Sp	No
Salisbury D	Trucks	4000	140	¾ F	S B	2320	2320	None	None	5.85	None	None	None	None	3.40	None	1.50	None	1.50	1.50	3140	41½	38	Sp	Sp	No
Salisbury G	Cars	1100		½ F	S B	2320	2320	None	None	5.00	4.75	None	None	None	5.65	None	1.00	None	1.12	1.37	3140	41½	37	S-T	Sp	Yes
Sheldon W500	Trucks			½ F	Wo			Bro	None	5.50	14.67		None	None		None		None	1.37	1.57	2340	42	35	Sp		No
Sheldon W1001	Trucks	2670		½ F	Wo			Bro	None	5.20	7.75	9.67	None	None		None		None	1.37	1.96	2340	40	38	Sp		No
Sheldon W1501	Trucks	3650		½ F	Wo			Bro	None	5.50	6.50	8.75	None	None		None		None	1.50	2.17	2340	39	35	Sp		No
Sheldon W103	Trucks	5500		½ F	Wo			Bro	None	5.50	7.75	10.67	None	None		None		None	1.68	2.37	2340	41¼	32	Sp		No
Sheldon W21	Trucks	6260		½ F	Wo			Bro	None	5.67	8.75	9.50	None	None		None		None	1.87	2.75	2340	41	32	Sp		No
Sheldon W31	Trucks	12500		½ F	Wo			Bro	None	8.75	11.75	13.00	None	None		None		None	2.25	3.34	Spec	44	38	Sp		No
Sheldon W51	Trucks	14600		½ F	Wo			Bro	None	8.75	10.25	13.00	None	None		None		None	2.43	3.75	2340	46	43	Sp		No
Timken 0630-0630-H	Cars			½ F	S B	6115	6115	None	None	4.70	None	None	None	None	5.00	None	1.25	None	1.25	1.37	3140			Sp	Sp	
Timken 5320-5310	Cars			½ F	S B	6115	6115	None	None	4.90	4.08	4.45	None	None	4.25	None	1.25	None	1.37	1.75	3140			S-A	Sp	
Timken 5200	Cars			½ F	S B	6115	6115	None	None	4.90	4.41	5.09	None	None	5.00	None	1.12	None	1.37	1.75	3140			Sp	Sp	
Timken 5510	Cars			½ F	S B	6115	6115	None	None	4.45	4.08	4.58	None	None	4.00	None	1.50	None	1.37	2.12	3140			Sp	Sp	
Timken 5712-'62-'64	Cars			F F	S B	6115	6115	None	None	4.58	4.08	4.90	None	None	4.50	None	1.50	None	1.53	1.37	3140			T A	T A	No
Timken 5311	Trucks	3200		½ F	S B	Spec	Spec	None	None	4.90	5.50	6.48	None	None		None		None	1.39	.87	3240	40½	36	Sp		No
Timken 6250	Trucks	3600		½ F	Wo		3120	None	None	5.00	6.25	6.75	None	None		None		None	1.54	1.00	3140	39	39	Sp		No
Timken 6352	Trucks	4275		½ F	Wo			None	None	5.16	7.20	8.25	None	None		None		None	1.74	1.12	3140	39	39	Sp		No
Timken 6460	Trucks	6400		½ F	Wo		3120	None	None	6.00	7.25	9.25	None	None		None		None	1.94	1.25	3140	39½	39	Sp		No
Timken 6560	Trucks	7900		F F	Wo		3120	None	None	6.00	7.75	10.25	None	None		None		None	1.94	1.93	3240	39¾	37½	Sp		Yes
Timken 6511	Buses	10000		F F	Wo		3120	None	None	5.40	7.75	6.00	None	None		None		None	1.94		3240	53½	48¾	Sp		Yes
Timken 6666	Trucks	11200		F F	Wo		3120	None	None	6.20	8.75	10.33	None	None		None		None	2.25	2.25	3240	44¾	44¾	Sp		
Timken 6760	Trucks	15000		F F	Wo		3120	None	None	1166			None	None		None		None	2.65	2.65	3240	46½	44	Sp		Yes
U. S. 10000	Cars	2600	150	½ F	S B	2315	2315	None	None	4.38	4.80		None	None	5.00	None		None	1.25	1.56	Spec	40	30	Opt	Opt	No
Vig-Tor 305	C & T	2100	100	½ F	S B	2315	1020	None	None	4.90	3.77	5.45	None	None	5.00	None	1.25	None	1.12	1.56	3140	40½	37½	S-A	S-A	Opt
Vig-Tor 307	C & T	3000	120	½ F	S B	2315	2315	None	None	4.45	3.77	6.13	None	None	4.25	None	1.31	None	1.37	1.75	3140	40½	37	S-A	S-A	Opt
Vig-Tor 425	T & Bu.	9000	2000	F F	I G	2315	2315	2315	1020	1.00			9.41	5.40	3.50	5-7	1.00	1.75	1.37	1.37	3140	(40 (52	(37 (39	(Sp (T A	(Sp (T A	Opt
Vulcan 3-R	Trucks	6000	5000	F F	Wo	3120	Bro	None	None	7.75	6.50	8.67	None	None		None		None	1.75	1.75	3135	39	37		Sp	Yes
Vulcan 4-R	Trucks	7500	8000	F F	Wo	3120	Bro	None	None	7.75	6.80	8.50	None	None		None		None	2.00	2.00	3135	39	37		Sp	Yes
Wisconsin 1000-B	Trucks			½ F	Wo			None	None	1033	11.75		None	None		None		None				40¾	48	Sp	Sp	
Wisconsin 800-GC	Trucks	4000		½ F	Wo			None	None	6.70	7.75	8.60	None	None		None		None	1.62	2.31	3140	40	38	Sp	Sp	No
Wisconsin 800-HA	Trucks	5500		½ F	Wo			None	None	7.25	6.25	9.33	None	None		None		None	1.75	2.56	3140	40	38	Sp	Sp	No
Wisconsin 800-J-JC	Trucks	8000		½ F	Wo			None	None	7.75	8.66	9.66	None	None		None		None	2.00	2.68	3140	40	38	Sp	Sp	No
Wisconsin 40	T & Bu.	4000		½ F	D R	2315	2315	2315	2315	2.30			4.60	8.00	3.50	4-5	1.37	1.50	1.62	2.31	3140	40	36	S-A	S-A	
Wisconsin 50	T & Bu.	5500		½ F	D R	2315	2315	2315	2315	2.30			7.10	8.30	3.50	4-5	1.37	1.75	1.75	2.31	3140	40	38	Sp	Sp	
Wisconsin 60 A-B-C	T & Bu.	7300		½ F	D R	2315	2315	2315	2315	2.30			7.10	8.30	3.50	4-5	1.37	1.50	1.75	2.56	3140	40	38	Sp	Sp	No
Wisconsin 65 B-C	Trucks	8000		½ F	D R	2315	2315	2315	2315	2.30			7.75	9.20	3.50	4-5	1.37	1.75	2.00	2.68	3140	40	38	Sp	Sp	No
Wisconsin 88 E	Trucks	10000		½ F	D R	2315	2315	2315	2315	2.30			8.66	10.40	3.50	4-5	1.37	2.25	2.00	3.00	3140	41	38½	Sp	Sp	No
Wisconsin 900 CA	Trucks	10000		½ F	Wo	2315	2315	2315	2315				7.75	10.66					2.00	3.00	3140	41	38½	Sp	Sp	No
Wisconsin 120 BG-F	Trucks	12000		½ F	D R	2315	2315	2315	2315	2.30			9.40	7.75	3.50	4-5	1.37	2.25	2.25	3.37	3140	44½	42	Sp	Sp	No
Wisconsin 120 K	Buses	12000		½ F	D R	2315	2315	2315	2315	2.30			6.20	7.25	3.50	4-5	1.37	2.25	2.00	3.25	3140	50⅝	45	Sp		
Wisconsin 900 D-DA-E	Trucks	12000		½ F	Wo	2315	2315	2315	2315				10.00	11.66					2.25	3.37	31.0	40½	39	Sp	Sp	No
Wisconsin 160 B	Trucks	16000		F F	D R	2315	2315	2315	2315	2.30			8.80	11.00	3.00	4-5	1.50	2 50	2.50	2.50	3140	,8	40¾	Sp	Sp	

ABBREVIATIONS:
AA—Above Axle
—Bevel
B-L—Brown-Lipe
B-L-C—Brown-Lipe-Chapin
BA—Below Axle
B-R—Ball and Roller
Bro—Bronze
Bu—Buses
Car—Carbon
CS—Cast Steel
Dd—Dead
D R—Double Reduction
Ext D S—External Driveshaft
Ext Rw—External Rear Wheels
F F—Full Floating
½ F—Semi Floating
¾ F—Three-quarter Floating
Gre—Grease
IF—Inside of Frame
I G—Internal Gear
Int Rw—Internal Rear Wheels

Axle Specifications

Designed for Hotchkiss Drive?	Location of Spring Pads	DIFFERENTIAL			SERVICE BRAKE				EMERGENCY BRAKE				Location of Brake Shaft Arms	BEARINGS					Axle Housing Material (S.A.E. No.)	Minimum Road Clearance With Regular Tire Size (Ins.)	Tread (Ins.)	Weight (Lbs.)	Recommended Lubricant	MAKE AND MODEL
		Make	Type	Number of Pinions	Type and Location	Diameter of Drum (Ins.)	Lining Width (Ins.)	Lining Thickness (Ins.)	Type and Location	Diameter of Drum (Ins.)	Lining Width (Ins.)	Lining Thickness (Ins.)		First Reduction Pinion	Final Reduction Pinion	At Differential	At Wheels	On Pinion Shaft						
Yes	A A	B-L-C	B	4	Int-Rw	21	3	1/4	None	0	0	0	O F	Ball	Ball	Ball	Roller	Ball	Ma I	8 -36	72	850	Oil	Atlas LC8
Yes	A A	B-L-C	B	4	Int-Rw	24	3	1/4	Int-Rw	24	2 1/2	1/4	O F	Ball	Ball	Ball	Roller	Ball	Ma I	5 5/8-34	75	1000	Oil	Atlas LC12
Yes	A A	B-L-C	B	4	Int-Rw	14	2 1/4	1/4	None	0	0	0		Roller	None	Roller	Roller	Ball	1010	11 -36	56	283	Oil	Clark B306
Yes	Opt	B-L-C	B	4	Ext-Rw	16	2 1/2	1/4	Int-Rw	15 5/8	1 1/4	1/4	I F	B-R		Roller	Roller	B-R		10 3/8-30	56	505	Oil	Clark 1D
Yes	Opt	B-L-C	B	4	Ext-Rw	16	2 1/2	1/4	Int-Rw	15 5/8	2 1/2	1/4	I F	Roller	None	Roller	Roller	Ball	Steel	10 1/2-36	56	400	Oil	Clark B-360
No	A A	B-L-C	B	4	Ext-D S	9	4 1/2	1/4	Int-Rw	16	2 1/2	1/4	I F	Roller		Roller	Roller	B-R		12 -36	63 1/4	753	Oil	Clark 2-H
Yes	Opt	B-L-C	B	4	Ext-Rw	16 1/2	3	1/4	Int-Rw	16	2 1/2	1/4	I F	Roller		Roller	Roller	B-R		11 1/2-36	58	750	Oil	Clark 2-D
Yes	Opt	B-L-C	B	4	Int-Rw	16 3/8	2 1/2	1/4	Int-Rw	16 3/8	2 1/2	1/4	I F	Roller	None	Roller	Roller	Ball	Steel	10 5/8-40	60	628	Oil	Clark B-650
Yes	Opt	B-L-C	B	4	Ext-Rw	16 1/2	3	1/4	Int-Rw	16	2 1/2	1/4	I F	Roller	None	Roller	Roller	B-R		11 1/2-36	66*	751	Oil	Clark 2-D
Yes	Opt	B-L-C	B	4	Ext-Rw	20	3	1/4	Int-Rw	19 1/8	2 1/2	1/4	I F	B-R		Roller	Roller	B-R		11 1/2-36	71*	914	Oil	Clark 3-D
No	A A	B-L-C	B	4	Ext-D S	9	4 1/2	1/4	Int-Rw	19 1/8	2 1/2	1/4	I F	Roller		Roller	Roller	B-R		12 -36	67	985	Oil	Clark 5-H
No	Opt	B-L-C	B	4	Ext-Rw	20	3	1/4	Int-Rw	19 1/8	2 1/2	1/4	I F	B-R		Roller	Roller	B-R		11 1/2-36	65	950	Oil	Clark 3-D
No	A A	B-L-C	B	4	Ext-D S	9	4 1/2	1/4	Int-Rw	19 1/8	2 1/2	1/4	I F	Roller		Roller	Roller	B-R		12 -36	65	961	Oil	Clark 3-H
Yes	Opt	B-L-C	B	4	Int-Rw	22 1/4	3	1/4	None	0	0	0	I F	Roller		Roller	B-R	B-R		14 1/2-40	67	1279	Oil	Clark 5-D
Yes	Opt	B-L-C	B	4	Ext-Rw	14	2	3/32	Int-Rw	14	1 3/4	3/32	Opt	Roller	None	Roller	Roller	Roller		11 -32	56	240	Oil	Columbia 12000
Yes	Opt	B-L-C	B	4	Ext-Rw	16	2 1/2	3/32	Int-Rw	16	2 1/4	3/32	Opt	Roller	None	Roller	Roller	Roller		10 -32	56	270	Oil	Columbia 33000
Yes	Opt	B-L-C	B	4	Ext-Rw	16	2 1/2	1/4	Int-Rw	16	2 1/4	3/32	Opt	Roller	None	Roller	Roller	Roller		10 -34	56	320	Oil	Columbia 52000
Yes	A A	B-L	B	4	Ext-Rw	15 5/8			None	0	0	0	I F			None	Roller	Roller	Roller	Steel	10 1/2-36	56	420	No F	Eaton 750-R
Yes	Opt	B-L	B	4	Ext-Rw	15 1/2	2	1/4	Int-Rw	15 1/2	1 3/4	1/4	I F			None	Roller	Roller	Roller	Steel	10 -32	56	305	No F	Eaton 300-R
Yes	Opt	B-L	B	4	Ext-Rw	14 1/2	1 3/4	1/4	None	0	0	0	I F	Roller	None	Roller	Roller	Roller	Steel	10 -32	56*	250	No F	Eaton 38-HD
Yes	Opt	B-L	B	4	Ext-Rw	17	2 1/2	1/4	Int-Rw	17	2 1/2	1/4	I F	Roller	None	Roller	Roller	Roller	Steel	9 1/2-31	56	400	No F	Eaton 420R
Yes	A A	B-L	B	4	Int-Rw	15 5/8	1 3/4	3/32	Int-Rw	15 5/8	1 3/4	3/32	I F	Roller	None	Roller	Roller	Roller	Steel	10 -38	56 3/8		No F	Eaton 1000
Yes	A A	B-L	B	4	Int-Rw	18	2	1/4	Int-Rw	18	2	1/4	I F	Roller	None	Roller	Roller	Roller	Steel	10 1/2-38	59		No F	Eaton 1500-R
Yes	A A	B-L	B	4	Int-Rw	20	2 1/4	1/4	Int-Rw	20	2 1/4	1/4	I F	Roller	None	Roller	Roller	Roller	Steel	12 -40	61	686		Eaton 604
Yes	A A	Frost	B	4	Ext-Rw	14	2	3/32	Int-Rw	13 3/8	2	3/32	I F	Roller	Roller	Roller	Roller	Roller	1040	11 1/8-32	56	285	Oil	Eaton (Torb) 7500
Yes	A A	Frost	B	4	Ext-Rw	15	2 1/2	3/32	Int-Rw	14 1/8	2 1/4	3/32	I F	Roller	Roller	Roller	Roller	Roller	1040	12 1/8-34	56	3-5		Eaton (Torb) 10000
No	A A		B	4	Int-Rw	18	2 1/2	1/4	Int-Rw	18	1 3/4	1/4	I F	Roller	Ball	Roller	Roller	Roller	1040	12 3/8-36	57 5/8	560	Oil	Eaton (Torb) 15000
No	A A		B	4	Ext-Rw	18	2 1/2	1/4	Int-Rw	17 1/16	2 1/4	1/4	I F	Roller	Ball	Roller	Roller	Roller	1040	12 11/16-36	56	510	Oil	Eaton (Torb) C-3
No	A A		B	4	Int-Rw	20	2 1/2	1/4	Int-Rw	20	1 3/4	1/4	I F	Roller	Ball	Roller	Roller	Roller	1040	12 -36	60 1/2	720	Oil	Eaton (Torb) 25000
No	A A		B	4	Int-Rw	19	3 1/2	1/4	Ext-D S	10	4 1/2	1/4	I F	Roller	Ball	Roller	Roller	Roller	1040	12 3/4-36	67 13/16	1100	Oil	Eaton (Torb) E3
No	A A	New P	B	4	Ext-Rw	14	2 3/4	1/8	Int-Rw	14	2 3/4	1/8	I F	B-R	None	B-R	B-R	Ball	Ma I	9 1/2-34	56	390	Oil	Flint 70-BA-10
No	Opt	Own	B	4	Int-Rw	18	2 1/2	1/4	Int-Rw	18	2	1/4	I F	Roller	Roller	Roller	Roller	Roller	Steel	10 3/4-36	59 3/4	803	Oil	Huck 25
No	Opt	Own	B	4	Int-Rw	21	3 1/2	1/4	Int-Rw	21	2 1/4	1/4	I F	Roller	Roller	Roller	Roller	Roller	Steel	12 1/4-40	71 3/8	1264	Oil	Huck 50
No	Opt	Own	B	4	Int-Rw	21	3 1/4	1/4	Int-Rw	21	2 1/4	1/4	I F	Roller	Roller	Roller	Roller	Roller	Steel	10 3/4-36	75 1/4	1085	Oil	Huck 85
No			B		Int-Rw	16	†2		Int-Rw	16	†2				None	Roller	Roller	Ma I		11 -34	59	750		L-M 7150
No			B		Int-Rw	18	†2 1/4		Int-Rw	18	†2 1/4				None	Roller	Roller	Ma I		11 1/2-36	60	950		L-M 7250
Yes			B		Int-Rw	24	†2 1/2		Int-Rw	24	†2 1/2				None	Ball	Ball	Ma I		12 3/4-40	70 3/4	1800		L-M 7500
No			B		Int-Rw	14	†4 1/4		Int-Rw	14	†4 1/4				None	Roller	Roller	Roller		10 1/4-32	56	330		National A
No	Opt	B-L-C	B	2	Ext-Rw	12	1 3/4	3/32	Int-Rw	12	1 3/4	3/32	I F	Roller	None	Roller	Roller	Ball	Ma I	9 3/4-32	56	177	Oil	Penfield 3595
No	B A	B-L-C	B	4	Ext-Rw	14	2	1/4	Int-Rw	14	1 3/4	3/32	I F	Roller	None	Roller	Roller	Ball	1010	9 1/4-32	56	187	Oil	Penfield 3700
No	A A	Own	B	4	Ext-Rw	16 1/2	3	1/4	Int-Rw	16 1/2	2	1/4	I F	Ball	Ball	B-R	Roller	Ball	Ma I		60		Gre	Russell 44
No	A A	Own	B	4	Ext-Rw	16 1/2	3	1/4	Int-Rw	16 1/2	2	1/4	I F	Ball	Ball	B-R	Roller	Ball	Ma I		60		Gre	Russell 66
No	A A	Own	B	4	Ext-Rw	18	3	1/4	Int-Rw	18	2	1/4	I F	Ball	Roller	B-R	Roller	Ball	Ma I		60 3/8		Gre	Russell 82
No	A A	Own	B	4	Ext-Rw	14	2 1/2	1/4	Int-Rw	14	1 3/4	1/4	I F	Ball	Ball	B-R	Roller	Ball	Ma I		56	450	Gre	Russell 34
No	Opt	B-L-C	B	4	Ext-Rw	14 3/8	2	1/4	Int-Rw	14	2	1/4	Opt	Ball	None	Roller	Ball	Ball	1030	8 7/8-32	56	301	Oil	Salisbury A
No	Opt	B-L-C	B	4	Ext-Rw	16 3/8	2	1/4	Int-Rw	16	2	1/4	Opt	Ball	None	Roller	Ball	Ball	1030	9 3/8-33	56	360	Oil	Salisbury B
No	Opt	B-L-C	B	2	Ext-Rw	12 1/16	2	1/4	Int-Rw	12	2	1/4	Opt	Ball	None	Roller	Ball	Ball	1030	9 1/16-32	56	210	Oil	Salisbury C
No	Opt	B-L-C	B	4	Ext-Rw	16 3/8	2	1/4	Int-Rw	16	2	1/4	Opt	Ball	None	Roller	B-R	Ball	1030	9 1/4-34	56	370	Oil	Salisbury D
Yes	Opt	New P	B	2	Int-Rw	12	1 1/2	3/32	None	0	0	0	F I F	Ball	None	Roller	Ball	Ball	1015	9 1/4-31	56	155	Oil	Salisbury G
Yes			B		Int-Rw	12	†4		Int-Rw	12	†4				None	Ball	B-R	Roller	Ma I	13 1/4-36	56	286		Sheldon W500
Yes			B		Int-Rw	14	†5		Int-Rw	14	†5				None	Ball	B-R	Ball	Ma I	12 1/4-36	56	460		Sheldon W1001
Yes			B		Int-Rw	16	†5 1/2		Int-Rw	16	†5 1/2				None	Ball	B-R	Ball	Ma I	11 -36	57	621		Sheldon W1501
Yes			B		Int-Rw	18	†6		Int-Rw	18	†6				None	Ball	B-R	Ball	Ma I	10 1/2-36	62*	813		Sheldon W103
Yes			B		Int-Rw	18	†6		Int-Rw	18	†6				None	Ball	B-T	Ball	Ma I	9 3/4-36	60*	941		Sheldon W21
Yes			B		Int-Rw	20	†8 1/8		Int-Rw	20	†8 1/8				None	Ball	B-R	Ball	Steel	11 -40	69 3/4	1436		Sheldon W31
Yes			B		Int-Rw	24	†8 3/4		Int-Rw	24	†8 3/4				None	Ball	B-R	Ball	Steel	10 1/2-40	70 3/4	2064		Sheldon W51
Yes	B A	Own	B	2	Int-Rw	12	1 1/2	1/8	Ext-D S				I F	Roller	None	Roller	Roller	Roller	1010	10 3/4-32	56	144	No F	Timken 0630-0630-H
Yes	Opt	Own	B	4	Ext-Rw	15 3/8	2 1/2	1/8	Int-Rw	15	2 1/2	1/8	I F	Roller	None	Roller	Roller	Roller	1010	10 1/4-34	56	236	Oil	Timken 5320-5310
Yes	B A	Own	B	4	Ext-Rw	12	2	1/8	None	0	0	0	I F	Roller	None	Roller	Roller	Roller	1010	9 1/2-32	56	230	Oil	Timken 5200
Yes	B A	Own	B	4	Ext-Rw	16	2 1/2	1/8	None	15 5/8	2 1/2	1/8	I F	Roller	None	Toller	Roller	Roller	1010	10 -34	56	356	Oil	Timken 5510
	B A	Own	B	4	Ext-Rw	16	2 1/2	1/8	Int-Rw	15 5/8	2 1/2	1/8	I F	Roller	None	Roller	Roller	Roller	1010	9 3/4-34	56	380	Oil	Timken 5712-'62-'64
No			B		Int-Rw	15	†3 1/2		Int-Rw	15	†3 1/2				None	Roller	Roller	Roller	1010		56	360		Timken 5311
No			B		Int-Rw	15	†3 1/2		Int-Rw	15	†3 1/2				None	Roller	Roller	Roller	1010	11 1/2-23 1/2	56	378		Timken 6250
No			B		Int-Rw	15	†4 1/8		Int-Rw	15	†4 1/8				None	Roller	Roller	Roller	1010		56	477		Timken 6352
No			B		Int-Rw	16	†4 3/8		Int-Rw	15	†4 3/8				None	Roller	Roller	Roller	1010		58	695		Timken 6460
Yes			B		Int-Rw	18	†5 1/4		Int-Rw	18	†5 1/4				None	Roller	Roller	Roller	1010		58 1/2	857		Timken 6560
Yes			B		Int-Rw	21	†5 3/4		Int-Rw	21	†5 3/4				None	Roller	Roller	Roller	1010		74*	800		Timken 6511
			B		Int-Rw	21	†5 3/4		Int-Rw	21	†5 3/4				None	Roller	Roller	Roller	1010		65 1/4	1298		Timken 6666
Yes			B		Int-Rw	24	†5 7/8		Int-Rw	24	†5 7/8				None	Roller	Roller	Roller	1010		69 1/2	1772		Timken 6760
Yes	B A	B-L	B	4	Int-Rw	14	1 3/4	1/8	Int-Rw	14	1	1/8	I F	Roller	None	Roller	Roller	Roller	1020	10 -32	56	250	No F	U. S. 10000
Opt	Opt	Van-Dorn	B	2	Int-D S	9	3	1/8	Int-Rw	10 5/8	1 3/4	3/32	Opt	Ball	None	Roller	Roller		Steel	10 -33	56	225	Oil	Vig-Tor 305
Opt	Opt	Van-Dorn	B	4	Int-D S	9 1/2	3	1/8	Int-Rw	14	2	1/8	Opt	Ball	None	Roller	Roller		Steel	10 -31	56	300	Oil	Vig-Tor 307
Opt	Opt	Own	B	4	Int-D S	9	4 1/2	1/16	Int-D S	18	3	1/4	Opt	Roller	Roller	Roller	Roller	Roller	1015	13 -36	60*	750	Oil	Vig-Tor 425
Yes	A A	Own	B	4	Int-Rw	18	2	1/4	Int-Rw	18	2	1/4	I F	Roller	None	Roller	Roller	Ball	C S	10 -36	58	700	Oil	Vulcan 3-R
Yes	A A	Own	B	4	Int-Rw	20	2	1/4	Int-Rw	20	2	1/4	I F		None	Roller	Roller	Ball	C S	9 1/2-36	58 1/2	840	Oil	Vulcan 4-R
	A A		B	4	Int-Rw	24	3 1/2	1/8	Int-Rw	18	3 1/2	1/8	I F		None	Ball	Ball	Ball	Ma I	11 -42	70 1/2	1550	Oil	Wisconsin 1000-B
No	A A		B	4	Int-Rw	17	2 1/2	1/8	Int-Rw	12 1/4	2 1/2	1/8	I F	Ball	Roller	Ball	Roller	Ball	Ma I	11 -36	57 1/2	510	Oil	Wisconsin 800-GC
No	A A		B	4	Int-Rw	17	2 1/2	1/8	Int-Rw	12 1/4	2 1/2	1/8	I F		None	Ball	Roller	Ball	Ma I	11 -36	57 1/2	600	Oil	Wisconsin 800-HA
Yes	A A		B	4	Int-Rw	17	2 1/2	1/8	Int-Rw	12 1/4	2 1/2	1/8	I F		None	Ball	Roller	Ball	Ma I	11 -36	58	660	Oil	Wisconsin 800-J-JC
Yes	Opt		B	4	Int-Rw	17	2 1/2	1/8	Int-Rw	12 1/4	2 1/2	1/8	I F	Ball	Roller	Roller	Roller	Ball	Ma I	11 -36	57 1/2	475	Oil	Wisconsin 40
Yes	A A		B	4	Int-Rw	17	2 1/2	1/8	Int-Rw	12 1/4	2 1/2	1/8	I F	Ball	Roller	Roller	Roller	Ball	Ma I	11 -36	57 1/2	650	Oil	Wisconsin 50
Yes	A A		B	4	Int-Rw	17	2 1/2	1/8	Int-Rw	12 1/4	2 1/2	1/8	I F	Ball	Roller	Roller	Roller	Ball	Ma I	11 -36	57 1/2*	675	Oil	Wisconsin 60 A-B-C
Yes	A A		B	4	Int-Rw	17	2 1/2	1/8	Int-Rw	12 1/4	2 1/2	1/8	I F	Ball	Roller	Roller	Roller	Ball	Ma I	11 -36	57 1/2*	700	Oil	Wisconsin 65 B-C
Yes	A A		B	4	Int-Rw	20	2 1/2	1/8	Int-Rw	15 1/8	2 1/2	1/8	I F	Ball	B-R	Ball	Roller	Ball	Ma I	12 -40	59 1/2	835	Oil	Wisconsin 88 E
Yes	A A		B	4	Int-Rw	20	2 1/2	1/8	Int-Rw	15 1/8	2 1/2	1/8	I F	Ball	Roller	Ball	Roller	Ball	Ma I	12 -40	59 1/2	835	Oil	Wisconsin 900 CA
	Opt		B	4	Int-Rw	20	2 1/2	1/8	Int-Rw	15 1/8	2 1/2	1/8	I F	Ball		Ball	Roller	Ball	Ma I	12 -40	61	960	Oil	Wisconsin 120 BG-F
Yes	A A		B	4	Int-Rw	20	2 1/2	1/8	Int-Rw	15 1/8	2 1/2	1/8	I F			Ball	B-R	Ball	Ma I	13 -40	73	960	Oil	Wisconsin 120 K
Yes	A A		B	4	Int-Rw	20	2 1/2	1/8	Int-Rw	15 1/8	2 1/2	1/8	I F			Ball	Ball	Ball	Ma I	12 -40	60	935	Oil	Wisconsin 900 D-DA-E
	A A		B	4	Int-Rw	24	3 1/2	1/8	Int-Rw	18 1/2	3 1/2	1/8	I F	Ball	Ball	Ball	Roller	Ball	Ma I	11 -42	69 1/2	1600	Oil	Wisconsin 160 B

Int D S—Internal Driveshaft
Ma I—Malleable Iron
New P—New Process
No. F—Non-Fluid
Of—Outside of Frame

Opt—Optional
S-A—Springs and Torque Arm
S B—Spiral Bevel
Sp—Springs
Spec—Special

S-T—Springs and Torque Tube
T—Trucks
T A—Torque Arm
T R—Triple Reduction
Wo—Worm

†—Width of Drum
*—Optional
B—Bevel
‡—When used with four wheel brakes

American Stock Front Axle Specifications

MAKE AND MODEL	Designed For	Maximum Load on Spring Pads (Lbs.)	AXLE CENTER				Type of Steering Head	BEARINGS TYPE			MATERIAL		Transverse Inclination of Steering Pivots (Deg.)	Inclination of Steering Knuckle Spindles (Deg.)	Recommended Fore & Aft Inclination (Deg.)	Do Wheels Trail?	TIE ROD		Effective Length of Drag Link Arm (Ins.)	Spring Pad Location	ROAD CLEARANCE		FRONT WHEEL BRAKES			Wheel Tread (Ins.)	Weight (Complete Without Wheels, Lbs.)	MAKE AND MODEL
			Material (S.A.E. No.)	Type	Depth of Section (Ins.)	Width of Flange (Ins.)		In Hubs	Spindle Thrust	Pivots	Steering Knuckle (S.A.E. No.'s)	Knuckle Arm (S.A.E. No.'s)					Location	End Type			Absolute Minimum (Ins.)	Tire Size (Ins.)	Equipped?	Type	Diameter of Drum (Ins.)			
Columbia 1100	Cars	1300	1035	I	2¼	1⅝	Elliott	Roller	Ball	Plain	1035	1035	.....	2	2	.....	R A..	Ball..	8	A A..	11	32	N P..	None..	None..	56	70	Columbia 1100
Columbia 1500	Cars	1300	1035	I	2¼	1⅝	Rev. Ell.	Roller	Ball	Plain	2335	2335	7	2	2	.....	R A..	Ball..	8	A A..	11	32	Stk..	Int..	14	56	100	Columbia 1500
Columbia 3100	Cars	1600	1035	I	2⅜	1⅝	Elliott	Roller	Ball	Plain	1035	1035	0	2	2	.....	R A..	Ball..	9	A A..	10	32	N P..	None..	None..	56	85	Columbia 3100
Columbia 3100	Cars	1600	1035	I	2⅜	1⅝	Rev. Ell.	Roller	Ball	Plain	1035	1035	7	2	2	.....	R A..	Ball..	9	A A..	10	32	Stk..	Int..	14	56	115	Columbia 3100
Columbia 5000	Trucks	2000	1035	I	2⅜	1¾	Elliott	Roller	Ball	Plain	1035	1035	.....	2	2	.....	R A..	Ball..	9	A A..	10	34	N P..	None..	None..	56	100	Columbia 5000
Columbia 5000	Trucks	2000	1035	I	2⅜	1¾	Rev. Ell.	Roller	Ball	Plain	1035	1035	7	2	2	.....	R A..	Ball..	9	A A..	10	34	Stk..	Int..	15	56	130	Columbia 5000
Continental 600	Trucks	.....	1035	I	3	2⅜	Rev. Ell.	Roller	Roller	B & P	3135	3135	11	2	.....	No	R A..	Ball..	8¼	A A..	15	36	Opt..	Int..	17	60*	.....	Continental 600
Continental 650	Buses	.....	1035	I	3	2⅜	Rev. Ell.	Roller	Roller	B & P	3135	3135	11	2	.....	No	R A..	Ball..	8¼	A A..	10	36	Opt..	Int..	17	60*	.....	Continental 650
Continental 1803	Trucks	.....	1035	I	3⅜	2¼	Elliott	Roller	Roller	Roller	3135	3135	.....	1½	.....	No	R A..	Ball*.	7¼	A A..	14½	36	Opt..	Int..	17	60*	.....	Continental 1803
Continental 1901	Trucks	.....	1035	I	2¾	2	Elliott	Roller	Roller	Ball	3135	3135	.....	1½	.....	No	R A..	Ball*.	6⅜	A A..	15	36	Opt..	Int..	17	56*	.....	Continental 1901
Continental 2001	Trucks	.....	1035	I	2½	1¾	Elliott	Roller	Roller	Plain	3135	3135	.....	1½	.....	No	R A..	Ball*.	6⅜	A A..	12	34	.....	.....	.....	56	.....	Continental 2001
Continental 2005	Trucks	.....	1035	I	4	2½	Elliott	Roller	Roller	Roller	3135	3135	.....	1½	.....	No	R A..	Y & P.	.....	A A..	14	36	Opt..	Int..	20	61½*	.....	Continental 2005
Continental 2301	Trucks	.....	1035	I	2½	1¾	Elliott	Roller	Roller	Plain	3135	3135	.....	1½	.....	No	R A..	Ball*.	6⅜	A A..	12	34	N P..	None..	None..	56	.....	Continental 2301
Continental 2302	Trucks	.....	1035	I	2¾	2	Elliott	Roller	Roller	Roller	3135	3135	.....	1½	.....	No	R A..	Ball*.	6⅜	A A..	15	36	Opt..	Int..	17	56*	.....	Continental 2302
Eaton 300F	Cars	3000	2335	I	2½	1¾	Elliott	Roller	Plain	.....	2335	2335	0	2	15	Yes	R A..	Ball..	8	A A..	7	32	N P..	None..	None..	56	84	Eaton 300F
Eaton 11HB	Cars	3200	1035	I	2⅜	1¾	Rev. Ell.	Roller	Plain	.....	3135	3135	0	2	15	Yes	R A..	Ball..	8¼	A A..	12½	32	Stk..	Int..	14½	53½	150	Eaton 11HB
Eaton 420F	Cars	4200	3135	I	2½	2⅜	Elliott	Roller	Roller	.....	3135	3135	0	2	15	Yes	R A..	Ball..	7⅞	A A..	9	34	N P..	None..	None..	56	120	Eaton 420F
Eaton 504	Trucks	5000	1035	I	3	2	Elliott	Roller	Plain	.....	2335	2335	0	2	15	Yes	R A..	Y & P.	7¼	A A..	11	36	N P..	None..	None..	58¼	200	Eaton 504
Eaton (Torb) 750F	Trucks	1800	1040	I	2⅜	1¾	Elliott	Roller	Plain	Plain	Spec.	3135	0	2	19	Yes	R A..	Y & P.	8	A A..	9⅞	32	N P..	None..	None..	56	100	Eaton (Torb) 750F
Eaton (Torb) AA3B	Trucks	2200	1040	I	2½	2	Elliott	Roller	Plain	Plain	3135	3135	0	2	19	Yes	R A..	Y & P.	8⅝	A A..	11	34	N P..	None..	None..	56	120	Eaton (Torb) AA3B
Eaton (Torb) CC3B	Trucks	2700	1040	I	2¾	2¼	Elliott	Roller	Plain	Plain	3135	3135	0	2	½	Yes	R A..	Y & P.	7⅞	A A..	13⅛	36	N P..	None..	None..	56	180	Eaton (Torb) CC3B
Flint 70-BA-80	T & B	2200	1045	I	2¼	1½	Elliott	Roller	Plain	Plain	3135	1035	0	1¾	1	Yes	R A..	Y & P.	8	A A..	11½	34	N P..	None..	None..	56	91	Flint 70-BA-80
Penfield 2810	Cars	1200	1035	I	2⅛	1⅜	Elliott	Roller	Plain	Plain	1035	1035	.....	1¾	.....	No	R A..	Y & P.	.....	A A..	12¼	32	N P..	None..	None..	56	46	Penfield 2810
Penfield 3435	Cars	1400	1035	I	2⅛	1⅜	Elliott	Roller	Plain	Plain	1035	1035	.....	1¾	.....	No	R A..	Y & P.	.....	A A..	9¾	32	N P..	None..	None..	56	56	Penfield 3435
Penfield 3300	Cars	1700	1035	I	2¼	1½	Elliott	Roller	Plain	Plain	1035	1035	.....	1¾	.....	No	R A..	Y & P.	.....	A A..	10¼	32	N P..	None..	None..	56	64	Penfield 3300
Salisbury A&E	Cars	1600	1040	I	2¼	1½	Elliott	Roller	Plain	Plain	1040	1040	0	2½	1	Yes	R A..	Y & P.	8	A A..	10⅛	32	N P..	None..	None..	56	90	Salisbury A&E
Salisbury B	Cars	2000	1040	I	2½	1⅝	Elliott	Roller	Plain	Plain	1040	1040	0	2½	1	Yes	R A..	Y & P.	8	A A..	10	33	N P..	None..	None..	56	106	Salisbury B
Salisbury C	Cars	1400	1040	I	2⅛	1⅜	Elliott	Roller	Plain	Plain	1040	1040	5½	2½	1	Yes	R A..	Ball..	8	A A..	9⅜	32	Opt..	Ext..	12⅛	56	100	Salisbury C
Salisbury D	Trucks	2000	1040	I	2½	1⅝	Elliott	Roller	Plain	Plain	3140	3140	0	2½	1	Yes	R A..	Opt..	8	A A..	12	34	N P..	None..	None..	56	106	Salisbury D
Salisbury G	Cars	1100	1040	I	2	1¼	Rev. Ell.	Roller	Plain	Plain	3140	1040	7	2½	1	Yes	R A..	Ball..	8	A A..	8 7/16	31	Stk..	Int..	12	56	60	Salisbury G
Sheldon D343	Trucks	2450	1030	I	.....	.....	.....	Roller	Plain	.....	3135	.....	.....	1½	.....	.....	.....	Y & P.	.....	A A..	.....	.....	N P..	None..	None..	56	193	Sheldon D343
Sheldon D370	Trucks	3190	1030	I	.....	.....	.....	Roller	Ball	.....	3135	.....	.....	1½	.....	.....	.....	Y & P.	.....	A A..	.....	.....	N P..	None..	None..	Opt..	224	Sheldon D370
Sheldon 4FA-20	Trucks	4460	1030	I	.....	.....	.....	Roller	Ball	.....	3135	.....	.....	1½	.....	.....	.....	Y & P.	.....	A A..	.....	.....	N P..	None..	None..	Opt..	320	Sheldon 4FA-20
Sheldon F5A-30	Trucks	2890	1030	I	.....	.....	.....	Roller	Ball	.....	3135	.....	.....	1½	.....	.....	.....	Y & P.	.....	A A..	.....	.....	N P..	None..	None..	Opt..	520	Sheldon F5A-30
Sheldon D260	Trucks	1100	1030	I	.....	.....	.....	Roller	Plain	.....	3135	.....	.....	1½	.....	.....	.....	Y & P.	.....	A A..	.....	.....	N P..	None..	None..	56	90	Sheldon D260
Sheldon 33FA	Trucks	1550	1030	I	.....	.....	.....	Roller	Plain	.....	3135	.....	.....	1½	.....	.....	.....	Y & P.	.....	A A..	.....	.....	N P..	None..	None..	56	139	Sheldon 33FA
Shuler 310	Trucks	2400	1035	I	2½	1¾	Elliott	Roller	Plain	Plain	3135	3135	0	2	0	No	R A..	Opt..	6½	A A..	12	32	Opt..	Int..	15⅝	56*	120	Shuler 310
Shuler 5310	T & B	2400	1035	I	2½	1¾	Elliott	Roller	Plain	Plain	3135	3135	0	2	0	No	R A..	Ball*.	7½	A A..	10½	32	Opt..	Int..	12	56	100	Shuler 5310
Shuler 350	Trucks	3000	1035	I	2½	1¾	Elliott	Roller	Plain	Plain	3135	3135	0	2	0	No	R A..	Ball*.	6½	A A..	12	32	Opt..	Int..	15⅝	56*	130	Shuler 350
Shuler 5410	T & B	3000	1035	I	2¾	2	Elliott	Roller	Ball	Plain	3135	3135	0	2	0	No	R A..	Ball*.	6½	A A..	11¼	34	Opt..	Int..	15⅝	56*	130	Shuler 5410
Shuler 510	Trucks	3400	1035	I	2¾	2	Elliott	Roller	Plain	Plain	3135	3135	0	2	0	No	R A..	Ball*.	6½	A A..	13	34	Opt..	Int..	15⅝	56*	170	Shuler 510
Shuler 550	Trucks	4000	1035	I	2¾	2	Elliott	Roller	Plain	Plain	3135	3135	0	2	0	No	R A..	Ball*.	6½	A A..	13	34	Opt..	Int..	15⅝	58*	185	Shuler 550
Shuler 5550	Trucks	4000	1035	I	3	2⅛	Elliott	Roller	Ball	Plain	3135	3135	0	2	0	No	R A..	Ball*.	7⅛	A A..	12⅜	34	Opt..	Int..	15⅝	58*	205	Shuler 5550
Shuler 5550-B	Buses	4000	1035	I	3	2⅛	Elliott	Roller	Ball	Plain	3135	3135	0	2	0	No	R A..	Y & P.	8⅝	A A..	9	34	Opt..	Int..	15⅝	64½*	225	Shuler 5550-B
Shuler 610	Trucks	5400	1035	I	3½	2¼	Elliott	Roller	B-P.	Plain	3135	3135	0	2	0	No	R A..	Y & P.	6¾	A A..	13½	34	Opt..	Int..	17½	64½*	235	Shuler 610
Shuler 610-B	Buses	5400	1035	I	3½	2¼	Elliott	Roller	B-P.	Plain	3135	3135	0	2	0	No	R A..	Y & P.	8¾	A A..	6½	34	Opt..	Int..	17½	64½*	255	Shuler 610-B
Shuler 650	Trucks	7500	1035	I	3½	2¼	Elliott	Roller	B-P.	Plain	3135	3135	0	2	0	No	R A..	Y & P.	7	A A..	13½	34	Opt..	Int..	17½	64½*	290	Shuler 650
Shuler 650-B	Buses	7500	1035	I	3½	2¼	Elliott	Roller	B-P.	Plain	3135	3135	0	2	0	No	R A..	Y & P.	8¾	A A..	6½	34	Opt..	Int..	17½	64½*	300	Shuler 650-B
Timken 1460, 1526	Trucks	3000	1035	I	.....	.....	Elliott	Roller	Plain	Plain	5130	5130	0	2	.....	.....	R A..	Y & P.	.....	A A..	.....	.....	N P..	None..	None..	.....	.....	Timken 1460, 1526
Timken 1544	Trucks	3600	1035	I	.....	.....	Elliott	Roller	Roller	Plain	5130	5130	0	1½	.....	.....	R A..	Y & P.	.....	A A..	.....	.....	N P..	None..	None..	.....	.....	Timken 1544
Timken 1632	Trucks	5000	1035	I	.....	.....	Elliott	Roller	Roller	Plain	5130	5130	0	1½	.....	.....	R A..	Y & P.	.....	A A..	.....	.....	N P..	None..	None..	.....	.....	Timken 1632
Timken 1732B	Trucks	7000	1035	I	.....	.....	Elliott	Roller	Roller	Plain	5130	5130	0	1½	.....	.....	R A..	Y & P.	.....	A A..	.....	.....	N P..	None..	None..	68⅜	.....	Timken 1732B
Timken 1160-61-63	Cars	.....	Spec..	I	2⅜	1¾	Rev. Ell.	Roller	Ball	Plain	Spec.	Spec.	0	2	0	Yes	R A..	Ball..	.....	A A..	10½	32	Opt..	Ext..	14⅜	56	75	Timken 1160-61 63
Timken 1011-2011-H	Cars	.....	1035	I	2⅛	1⅝	Rev. Ell.	Roller	Ball	Plain	Spec.	Spec.	6	3	.....	Yes	R A..	Ball..	.....	A A..	10¾	32	Opt..	Ext..	12	56	59	Timken 1011-2011-H
Timken 1216-C, 2330,-2331-H	Cars	.....	Spec..	I	2⅜	2⅝	Rev. Ell.	Roller	Plain	Plain	Spec.	Spec.	0	2	.....	Yes	R A..	Ball..	.....	A A..	10⅝	34	Opt..	Ext..	15½	56	70	Timken 1216-C, 2330,-2331-H
U. S. A	Cars	1650	1035	I	1¾	1⅝	Lemoine	Roller	Roller	Roller	2335	3135	.....	1½	2	No	R A..	Ball..	8	A A..	10¼	32	Stk..	Int..	14	56	135	U. S. A
U. S. B	Cars	2200	2330	I	2½	2	Rev. Ell.	Roller	Roller	Ball	3135	3135	9	1½	2	No	Opt..	Ball..	8	A A..	10	16	Stk..	Int..	14	56	165	U. S. B
Vig-Tor 105	C & T	1300	1035	I	2¼	1⅝	Rev. Ell.	Roller	.....	Roller	2335	2335	0	2	.....	Yes*	R A..	Ball..	8½	A A..	.....	.....	N P..	None..	None..	56	75	Vig-Tor 105
Vig-Tor 107	C & T	1700	1035	I	2⅜	1⅝	Rev. Ell.	Roller	.....	Roller	2335	2335	0	2	0	Yes*	R A..	Ball..	8½	A A..	.....	.....	N P..	None..	None..	56	90	Vig-Tor 107
Vig-Tor 125	T & B	3300	1035	I	3	2	Rev. Ell.	Roller	.....	Roller	2335	2335	0	2	.....	Yes*	R A..	Y & P.	8	A A..	.....	.....	N P..	None..	None..	58	225	Vig Tor 125
Vulcan 3F	Trucks	2600	1035	I	2¾	2⅛	Elliott	Roller	Plain	Plain	3135	3135	.....	1½	3	.....	R A..	Y & P.	7	A A..	12	36	N P..	None..	None..	.....	.....	Vulcan 3F
Vulcan 4F	Trucks	3200	1035	I	3	2¼	Elliott	Roller	Plain	Plain	3135	3135	.....	1½	3	.....	R A..	Y & P.	7	A A..	12	36	.....	.....	.....	.....	.....	Vulcan 4F
Wisconsin 10	Trucks	2750	1035	I	2¾	1¾	Elliott	Roller	B-P.	Plain	3135	1025	.....	2	.....	No	R A..	Y & P.	.....	A A..	11	34	N P..	None..	None..	56	146	Wisconsin 10
Wisconsin 20	Trucks	3400	1035	I	3⅛	2	Elliott	Roller	Plain	Plain	3135	1025	.....	2	.....	No	R A..	Y & P.	.....	A A..	11	34	N P..	None..	None..	58	195	Wisconsin 20
Wisconsin 30	Trucks	5000	1035	I	3⅜	2¼	Elliott	Roller	Ball	Plain	3135	1025	.....	2	.....	No	R A..	Y & P.	.....	A A..	12	36	N P..	None..	None..	65	275	Wisconsin 30
Wisconsin 50	Trucks	6600	1035	I	4	2½	Elliott	Roller	Ball	Plain	3135	1025	.....	2	.....	No	R A..	Y & P.	.....	A A..	11	36	N P..	None..	None..	65	380	Wisconsin 50

ABBREVIATIONS:
*—Dimensions optional
A A—Above Axle
B-P—Ball or Plain
B&P—Ball and Plain
Bu—Buses
B—Buses
C—Cars
Ext—External
I—"I" Section
Int—Internal
N P—No Provision
Opt—Optional
Rev Ell—Reverse Elliott
R A—Rear of Axle
T—Trucks
Spec—Special
Stk—Standard Equipment
Y & P—Yoke and Pin

American Motorcycle Specifications

MAKE AND MODEL	ENGINE													IGNITION AND LIGHTING SYSTEM					
									Carburetor		Oiling System				Ignition		Lighting		
	Type	Number of Cylinders—Bore and Stroke (Ins.)	Cycle	Rated H.P. (N.A.C.C.)	R.P.M. at Maximum Brake H.P.	Piston Displacement (Cu. Ins.)	Valve Arrangement	Piston Material	Make	Size (Ins.)	Type	Pump Type	Lubricant Type	Type	Current Source	Make	Stock or Optional	Type	Make
Ace.....1924	Vert..	4-2¾x3¼	4	12.10	20-3100	77.2	OhI Si E..	AlumA*.	Schebler...	1	Splash...	Gear..	OO...	Ge & Ig SeU.....	Mag..	Simms..	Stk...	Ele...	Split....
Cleveland.....24SE	Vert..	1-2¾x2¾	2	3.02	.....	16.3	3 Port.....	Cast I...	Zenith....	¾	Splash...	None..	OG...	Ge & Ig SeU.....	Mag..	Bosch...	Opt*..	Ele...	Split....
Emblem.....106	Vee...	2-2⅝x3	4	5.51	5-1800	50.0	OhI Si E..	Cast I...	Schebler...	¾	Splash...	None..	OO...	Ign Syst only....	Mag..	Eric....	Stk...	Gas...	Anny...
Excelsior.....1924	Vee...	2-3²¹/₆₄x3½	4	10.51	16-3600	61.0	OhI Si E..	Cast I...	Schebler...	1	Sp-Pr...	Pist...	OO...	Ge & Ig SeU.....	Mag..	Split....	Stk...	Ele...	Split....
Evans Power Cycle.....G	Vert..	1-2 x1¾	2	.....	1.5-3000	5.5	3 Port.....	Cast I...	Own.....	⅝	Splash...	None..	OG...	Ge & Ig Comb...	Mag..	Bosch...	Stk...	Ele...	Bosch...
Harley-Davidson....24FD&JD	Vee...	2-3⅞x4	4	9.45	22-3600	74.0	OhI Si E..	Cast I...	Schebler...	1¼	Splash...	Pist...	OO...	Ge & Ig Comb..	Bat...	Own....	Stk...	Ele...	Own...
														Ign Syst only...	Mag..	Bosch...	Opt*..	Gas...	None...
Harley-Davidson.....24FE&JE	Vee...	2-3⅝x3½	4	8.76	19-3600	61.0	OhI Si E..	Alum A.	Schebler...	1¼	Splash...	Pist...	OO...	Ge & Ig Comb..	Bat...	Own....	Stk...	Ele...	Own...
														Ign Syst only...	Mag..	Bosch...	Opt*..	Gas...	None...
Harley-Davidson.FDCA&JDCA	Vee...	2-3⅞x4	4	9.45	24-4000	74.0	OhI Si E..	Alum A.	Schebler...	1¼	Splash...	Pist...	OO...	Ge & Ig Comb..	Bat...	Own....	Stk...	Ele...	Own...
														Ign Syst only...	Mag..	Bosch...	Opt*..	Gas...	None...
Henderson.....DeLuxe	Vert..	4-2¹¹/₁₆x3½	4	11.66	28-3800	79.4	Si by Si...	Alum A.	Zenith....	1	F Press..	Gear..	OO...	Ge & Ig SeU.....	Mag..	Simms...	Stk...	Ele...	Split....
Indian.....“G” Scout	Vee...	2-2¾x3 1/16	4	6.05	11.5-3100	36.4	Si by Si...	Cast I...	Schebler...	1	Splash...	Pist...	OO...	Ge & Ig SeU.....	Mag..	Split....	Stk...	Ele...	Split....
Indian.....“H” Chief	Vee...	2-3 1/16x3 1/32	4	7.81	19.3-3100	60.9	Si by Si...	Cast I...	Schebler...	1¼	Splash...	Pist...	OO...	Ge & Ig SeU.....	Mag..	Split....	Stk...	Ele...	Split....
Indian.....Big Chief	Vee...	2-3 x4 7/16	4	8.45	23-3100	73.7	Si by Si...	Cast I...	Schebler...	1¼	Splash...	Pist...	OO...	Ge & Ig SeU.....	Mag..	Split....	Stk...	Ele...	Split....
Ner-A-Car.....3 Series	Vert..	1-2½x2¾	2	2.50	.....	13.5	3 Port.....	Cast I...	Brown & B	15/16	Splash...	None..	OG...	Ge & Ig Comb...	Mag..	Eisem...	Stk...	Ele...	Eisem...
Reading Standard.....24RSE	Vee...	2-3⅝x4	4	9.10	16	71.6	Si by Si...	Alum A.	Zenith....	1¼	Splash...	Gear..	OO...	Ge & Ig Comb...	Mag..	Bosch...	Stk...	Ele...	Bosch...
Schickel.....T	Vert..	1-3 x2½	2	3.60	.....	17.6	2 Port.....	Cast I...	Own.....	15/16	Splash...	None..	OG...	Ign Syst only....	Mag..	Split....	Opt*..	Ele...	Own ...

MAKE AND MODEL	TRANSMISSION										WHEELS AND FRAME							MISCELLANEOUS					Weights		Prices	
	Clutch		Gearset				Gear Ratios									Brakes										
	Type	Controlled by	Type	Number of Forward Speeds	Reverse Gear Fitted?	Rear Wheel Sprung?	Engine to Gearset	Low	Second	Third	Final Drive Type	Wheelbase (Ins.)	Tire Size (Ins.)	Frame Type	Front Spring Type	Starting System	Foot	Hand	Maximum High Speed (M.P.H.)	Gasoline Tank Capacity (Gals.)	Oil Tank Capacity (Qts.)	Height of Saddle Above Ground (Ins.)	Minimum Road Clearance (Ins.)	Electrically Equipped (Lbs.)	Not Equipped (Lbs.)	Equipped	Not Equipped
Ace.....1924	Oil D...	P & HL.	Prog..	3	No..	No..	1.65	11.60	8.13	4.70	Chain.	59½	27x3½	Cradle	HS.	Kick..	Ext...	Yes...	....	3½	4†	27½	4½	390	360	$375	$345
Cleveland.....24SE	Oil D...	Hand L.	Prog..	2	No..	No..	1.00	9.10	6.30	None..	Chain.	56	26x3	Diam.	HS.	Kick..	Ext...	None..	35	3½	....	27½	5¼	220	210	235	200
Emblem.....106	Dry D..	P&HL..	Fric...	3	No..	No..	1.50	8.00	5.00	3.00	Chain.	52	26x2½	Loop..	HS.	Kick..	Ext...	None..	50	2	2	29	....	220	210	240	200
Excelsior.....1924	Dry D..	P&GH..	Prog..	3	No..	No..	2.50	11.20	7.60	4.60	Chain.	60	27x3½	Diam.	HS.	Kick..	Ext...	Yes*..	65	2¾	2	27½	5	367	....	310	....
Evans Power Cycle.....G	None...	None...	None..	1	No..	No..	None..	10.10	None..	Non	Belt...	49	28x2	Loop..	HS.	Pedal.	Hub..	None..	30	1½	....	30	6	72	....	140	....
Harley-Davidson....24FD&JD	Dry D..	P&HL..	Prog..	3	No..	No..	2.53	9.77	6.51	4.31	Chain.	60	28x3	Loop..	HS.	Kick..	Ext...	Yes*..	70	3½	4	29½	5	387	359	335	315
Harley-Davidson.....24FE&JE	Dry D..	P&HL..	Prog..	3	No..	No..	2.69	9.50	6.33	4.68	Chain.	60	28x3	Loop..	HS.	Kick..	Ext...	Yes*..	68	3¼	1	29½	5	381	353	320	300
Harley-Davidson.FDCA&JDCA	Dry D..	P&HL..	Prog..	3	No..	No..	2.53	9.77	6.51	4.34	Chain.	60	28x3	Loop..	HS.	Kick..	Ext...	Yes*..	78	3¼	4	29½	5	385	357	345	325
Henderson.....DeLuxe	Oil D...	P&HL..	Prog..	3	Yes.	No..	1.60	12.00	7.30	4.50	Chain.	60	27x3½	DLoop	HS.	Kick..	Ext...	Int*..	75	4	4†	28½	4½	408	....	398	....
Indian.....“G” Scout	Oil D...	Pedal...	Prog..	3	No..	No..	2.50	12.05	7.66	4.88	Chain.	54	26x3	DLoop	LS..	Kick..	Int...	None..	55	3	3	29	5	327	....	290	....
Indian.....“H” Chief	Oil D...	Pedal...	Prog..	3	No..	No..	2.57	11.91	7.57	4.82	Chain.	60½	28x3	DLoop	LS..	Kick..	Int...	None..	70	3⅝	4	30	5	425	....	335	....
Indian.....Big Chief	Oil D...	Pedal...	Prog..	3	No..	No..	2.57	11.30	7.19	4.58	Chain.	60½	28x3	DLoop	LS..	Kick..	Int...	None..	75	3⅝	4	30	5	430	....	348	....
Ner-A-Car.....3 Series	Fric.....	Gon HB.	Fric...	5	No..	No..	11.50	8.62	7.18	5.75	Chain.	56	26x3	DLoop	HS.	Kick..	Int...	Int*..	35	2	....	29	6	192	....	210	200
Reading Standard.....24RSE	Dry D..	P&HL..	Prog..	3	No..	No..	2.57	10.51	6.86	4.47	Chain.	58	28x3	Diam.	HS.	Kick..	Int...	Ext....	70	3¼	3	28½	5¼	368	358	345	310
Schickel.....T	Oil D...	Pedal...	Fric...	2	No..	No..	1.00	9.00	6.00	.....	Chain.	53	26x2¼	Diam.	HS.	Kick..	Ext...	None..	40	1½	¾	28	6	170	165	175	165

ABBREVIATIONS:

Alum A—Aluminum Alloy
Bat—Battery
Brown & B—Brown & Barlow
Cast I—Cast Iron
Diam—Diamond
D Loop—Double Loop
Dry D—Dry Disk
Eisem—Eisemann
Ele—Electric
Eric—Ericsson
Ext—External
FPress—Full pressure
Fric—Friction
Ge & Ig Comb—Generator and Ignition Units Combined
Ge & Ig Se U—Generator and Ignition separate Units
G on HB—Grip on Handle Bars
HS—Helical Spring
Hand L—Hand Lever
Ign Syst only—Ignition System only
Int—Internal
LS—Leaf Spring
Mag—Magneto
O G—Mix Oil with Gasoline
Oh I Si E—Overhead Inlet Side Exhaust
Oil D—Oil Disk
O O—Oil Only
Opt—Optional
P & G H—Pedal and Grip on Handle Bars
P & H L—Pedal and Hand Lever
Pist—Piston
Prog—Progessive Sliding
Si by Si—Side by Side
Split—Splitdorf
Sp Pr—Splash with Pressure
Stk—Stock Equipment
Vert—Vertical
*—Optional at extra cost
†—Crank Case capacity

British Motorcycle Specifications

NAME	ENGINE										TRANSMISSION								MISCELLANEOUS										PRICES	
											Clutch		Gearset		Gear Ratios							Brakes								
	Manufacturers' H.P. Rating	Number of Cyls.	Bore and Stroke (Ins.)	Cylinder Arrangement	Cycle Type	Piston Displacement (Cu. In.)	Make	Valve Arrangement	Piston Material	Oiling System	Type	Controlled By	Make	Number of Speeds	Low	Second	High	Drive	Wheelbase (Ins.)	Tire Size (Ins.)	Frame Type	Front	Rear	Starting System	Lighting System	Fuel Tank Capacity (Pints)	Weight Solo M/c (Lbs.)	Solo £	Standard Combination £
A. J. S.	2¾	1	2.91x3.18	Ver.	4	21	Own.	L.	Al.	S & P.	M P.	H.	Own.	3	14.0	9.3	5.5	Chain	53	26x2½	R.	Exp.	Exp.	K.	None.	12	214	62	....
A. J. S.	2¾	1	2.91x3.18	Ver.	4	21	Own.	O.	Al.	S & P.	M P.	H.	Own.	3	10.3	6.8	5.5	Chain	53	26x2½	R.	Exp.	P.	None.	12	214	65	....
A. J. S.	7	2	2.91x3.66	Vee.	4	48	Own.	L.	Al.	S & P.	M P.	H.	Own.	3	16.0	9.0	5.0	Chain	57	28x3	R.	Exp.	Exp.	K.	Elec.	18	336	....	95
Ariel	2½	1	2.36x3 46	Ver.	4	15	Black.	L.	Al.	Spl.	M P.	H.	St Ar.	3	19.2	10.2	6.5	Chain	52	26x2¼	R.	V Rim.	V Rim.	K.	None.	12	196	50	....
Ariel	3½	1	3.39x3.34	Ver.	4	30	Own.	L.	C I.	Spl.	M P.	H.	Own.	3	16.5	8.7	5.3	Chain	57	26x2⅜	R.	V Rim.	V Rim.	K.	None.	17	250	65	82
Ariel	8	2	3.22x3.70	Vee.	4	59	MAG.	I.	C I.	Spl.	M P.	F.	Own.	3	14.3	7.7	4.6	Chain	61	28x3	R.	Exp.	Exp.	K.	None.	21	344	85	110
Bat	2¾	1	2.75x3.54	Ver.	4	21	J A P.	L.	C I.	S & P.	M P.	H.	St Ar.	3	12.0	9.0	5.5	Chain	53	28x2¼	R.	Exp.	Exp.	K.	Acet.	12	2'9	65	....
Bat	5	2	2.75x3.46	Vee.	4	41	J A P.	L.	C I.	S & P.	M P.	H.	St Ar.	3	12.0	9.0	5.5	Chain	58	26x2½	R.	Exp.	Exp.	K.	None.	16	350	85	110
Bat	8	2	3.36x3.34	Vee.	4	59	J A P.	L.	C I.	S & P.	M P.	H.	St Ar.	3	12.0	9.0	5.5	Chain	62	28x3	S.	Con.	Exp.	K.	Elec.	16	387	100	130
Beardmore	3½	1	2.75x3.54	Ver.	4	21	Own.	L.	C I.	S & P.	S P.	H.	St Ar.	3	16.1	8.4	5.6	Chain	50	26x2¼	R.	Con.	V Rim.	K.	None.	14	216	57	....
Beardmore	4	1	3.18x3.77	Ver.	4	30	Own.	L.	Al.	S & P.	M P.	H.	St Ar.	3	13.1	8.0	4.9	Chain	54	28x3	R.	Con.	Con.	K.	None.	16	248	70	90
Beardmore	4½	1	3.5 x3.77	Ver.	4	36	Own.	L.	C I.	S & P.	M P.	H.	St Ar.	3	14.6	9.0	5.5	Chain	54	28x3	S.	Con.	Con.	K.	None.	16	280	80	98
Bradbury	2¾	1	2.93x3.38	Ver.	4	21	Own.	L.	Al.	S &P.	M P.	H.	St Ar.	3	12.0	7.8	6.0	Chain	54	26x2⅜	R.	Exp.	Exp.	K.	None.	10	194	47	....
Bradbury	4½	1	3.14x4.48	Ver.	4	34	Own.	L.	C I	Spl.	M P.	H.	Own.	3	16.0	9.0	5.4	Chain	56	26x2½	R.	Exp.	Exp.	K.	None.	24	280	60	77
Bradbury	7	2	2.93x3.93	Vee.	4	53	Own.	L.	C I.	Spl.	M P.	H.	Own.	3	15.0	8.4	5.0	Chain	58	28x3	R.	Exp.	Exp.	K.	None.	24	332	70	92
B. S. A.	2¾	1	2.83x3.36	Ver.	4	21	Own.	L.	C I.	S & P.	M P.	H.	Own.	3	15.0	9.0	5.6	Chain	50	26x2¼	R.	V Rim.	V Rim.	K.	None	12	195	47	....
B. S. A.	4¼	1	3.34x3.85	Ver.	4	34	Own.	L.	C I.	S & P.	M P.	H.	Own.	3	13.0	8.0	5.0	Chain	54	26x2½	R.	V Rim.	V Rim.	K.	None.	14	260	65	....
B. S. A.	6	2	2.99x3.34	Vee.	4	47	Own.	L.	C I.	S & P.	M P.	H.	Own.	3	13.0	8.0	5.0	Chain	56	26x3	R.	V Rim.	V Rim.	K.	None.	14	290	80	....
B. S. A.	8	2	3.14x3.85	Vee.	4	60	Own.	L.	C I.	S & P.	M P.	H.	Own.	3	13.0	8.0	5.0	Chain	57	28x3	R.	V Rim.	Exp.	K.	None.	17	360	90	....
Brough	6	2	2.83x3.54	Vee.	4	45	MAG.	I.	Al.	Spl.	M P.	H.	St Ar.	3	11.0	5.6	3.7	Chain	55	26x3	R.	Exp.	V Rim.	K.	None.	16	260	100	140
Brough	8	2	3.36x3.38	Vee.	4	59	J A P.	L.	Al.	S & P.	M P.	H.	St Ar.	3	11.0	5.0	3.7	Chain	55	26x3	R.	Exp.	Exp.	K.	Elec.	20	300	150	180
Calthorpe	2½	1	2.63x2.71	Ver.	2	15	Own.	V.	C I.	S & P.	M P.	H.	Bur.	3	15.0	10.0	5.5	Ch & B.	51	24x2¼	R.	Exp.	Exp.	K.	None.	14	148	45	....
Calthorpe	3½	1	2.75x3.54	Ver.	4	21	J A P.	L.	C I.	S & P.	M P.	H.	Bur.	3	13.0	8.2	5.1	Chain	52	26x2½	R.	Exp.	Exp.	K.	None.	14	210	50	....
Cedos	2	1	2.36x2.75	Ver.	2	12	Own.	V.	C I.	Fuel.	S P.	H.	St Ar.	3	15.7	9.0	5.5	Ch & B.	48	24x2	R.	V Rim.	V Rim.	K.	None.	14	120	33	....
Cedos	2½	1	2.63x2.75	Ver.	2	15	Own.	V.	C I.	Spl	S P.	H.	St Ar.	3	15.0	8.0	5.0	Ch & B.	48	26x2¼	R.	V Rim.	V Rim.	K.	None.	14	115	42	....
Cotton	2¼	1	2.6 x2.70	Ver.	2	15	Vil.	V.	C I.	Spl.	M P.	H.	Bur.	3	14.0	8.2	5.3	Ch & B.	54	26x2¼	R.	Rim.	V Rim.	K.	None.	14	180	45	....
Cotton	2½	1	2.8 x3.46	Ver.	4	21.3	Black.	L.	C I.	Spl.	M P.	H.	Bur.	3	14.0	8.2	5.3	Ch & B.	54	26x2¼	R.	Rim.	V Rim.	K.	None.	14	190	50	....
Cotton	2¾	1	2.8 x3.46	Ver.	4	21.3	Black.	O.	Al.	Spl.	M P.	H.	Bur.	3	14.0	8.2	5.3	Chain	54	26x2¼	R.	Con.	Exp.	K.	None.	14	194	55	....
Dot	2¾	1	2.67x3.77	Ver.	4	20	Brad.	O.	Al.	S & P.	M P.	H.	St Ar.	3	13.0	8.5	5.0	Chain	53	26x2¼	R.	Exp.	Exp.	K.	None.	12	180	57	....
Dot	2¾	1	2.9 x3.10	Ver.	4	20	J A P.	O.	Al.	S & P.	M P.	H.	St Ar.	3	13.0	8.5	5.0	Chain	53	26x2¼	R.	Exp.	Exp.	K.	None.	12	175	72	....
Dot	8	2	3.26x3.62	Vee.	4	60	J A P.	L.	Al.	S & P.	M P.	H.	St Ar.	3	8.5	5.0	3.5	Chain	59	28x3	R.	Exp.	Exp.	K.	None.	16	360	125	....
Douglas	2¾	2	2.39x2.36	Hor.	4	21	Own.	L.	C I.	S & P.	S P.	H.	Own.	2	....	No.	....	Ch & B.	54	26x2¼	R.	Rim.	V Rim.	K.	Acet.	10	....	50	....
Douglas	2¾	2	2.24x2.67	Hor.	4	21	Own.	O.	C I.	S & P.	S P.	H.	Own.	3	....	....	....	Chain	58	26x2¼	R.	V Rim.	V Rim.	K.	Acet.	16	....	65	....
Douglas	4½	2	2.67x3.22	Hor.	4	36	Own.	O.	C I.	S & P.	S P.	H.	Own.	3	....	....	....	Chain	60	28x3	R.	V Rim.	V Rim.	K.	Acet.	16	....	80	100
Dunelt	4	1	3.34x3.46	Ver.	2	30	Own.	V.	Al.	S & P.	M P.	H.	St Ar.	3	12.0	8.0	4.8	Chain	55	26x2½	R.	V Rim.	V Rim.	K.	None.	18	275	65	90
Eagle	1½	1	2.16x2.44	Ver.	2	9	Vill.	V.	C I.	Fuel.	M P.	H.	St Ar.	2	13.0	No.	6.5	Cn & B.	50	26x2¼	R.	Rim.	V Rim.	K.	None.	12	130	32	....
Eagle	2¾	1	2.75x3.54	Ver.	4	21	J A P.	L.	C I.	S & P.	M P.	H.	St Ar.	3	14.0	8.5	5.2	Chain	52	26x2½	R.	Exp.	V Rim.	K.	None.	16	165	59	....
Eagle	8	2	3.36x3.34	Vee.	4	59	J A P.	L.	Al.	S & P.	M P.	H.	St Ar	3	12.0	7.5	4.5	Chain	58	28x3	R.	Exp.	V Rim.	K.	None.	20	320	120	....
Enfield	2¼	1	2.51x2.75	Ver.	2	13	Own.	V.	C I.	Fuel.	Exp.	F.	Own.	2	9.3	No.	5.4	Chain	49	26x2¼	R.	Rim.	V Rim.	K.	None.	15	155	42	....
Enfield	2¾	1	2.75x3.54	Ver.	4	21	Own.	O.	Al.	S & P.	Exp.	F.	Own.	2	9.3	No.	5.4	Chain	49	26x2½	R.	Rim.	V Rim.	K.	None.	13	190	57	....
Enfield	8	2	3.36x3.34	Vee.	4	59	Own.	L.	C I.	S & P.	Exp.	H.	Own.	2	8.3	No.	4.7	Chain	55	28x3	R.	V Rim.	V Rim.	C.	None.	16	290	....	10
Excelsior	1½	1	2.16x2.44	Ver.	2	9	Vill.	V.	C I.	Fuel.	None.	N.	Albion	2	13.0	No.	6.5	Ch & B.	48	24x2	R.	Rim.	V Rim.	P.	None.	9	112	27	....
Excelsior	2½	1	2.63x2.75	Ver.	2	15	Vill.	V.	C I.	Fuel.	M P.	H.	St Ar.	3	14.0	8.5	5.2	Ch & B.	49	24x2¼	R.	Rim.	V Rim.	K.	None.	9	158	36	....
Excelsior	4½	1	3.34x3.81	Ver.	4	33	Black.	L.	C I.	S & P.	M P.	H.	St Ar.	3	13.8	7.0	4.7	Chain	56	26x2½	R.	Exp.	Exp.	K.	None.	14	220	56	....
Excelsior	8	2	3.36x3.34	Vee.	4	59	J A P.	L.	C I.	S & P.	M P.	H.	St Ar.	3	13.4	6.9	4.6	Chain	57	28x3	R.	Exp.	Exp.	K.	None.	16	300	92	....
Francis Barnett	1½	1	2.16x2.44	Ver.	2	9	Vill.	V.	C I.	Fuel.	S P.	H.	St Ar.	2	....	No.	....	Ch & B.	48	24x2	R.	V Rim.	V Rim.	P.	None.	10	100	27	....
Francis Barnett	2¾	1	2.75x3.54	Ver.	4	21	J A P.	L.	C I.	S & P.	M P.	H.	St Ar.	3	10.5	7.5	5.2	Ch & B.	56	26x2½	R.	Exp.	V Rim.	K.	None.	12	210	63	....
Hawker	2½	1	2.75x3.00	Ver.	2	17	Own.	V.	C I.	S & P.	S P.	H.	Own.	2	10.0	No.	5.0	Ch & B.	52	26x2⅜	R.	V Rim.	V Rim.	P.	None.	12	160	40	....
Hawker	2¾	1	2.79x3.46	Ver.	4	21	Black.	L.	C I.	S & P.	M P.	H.	Bur.	3	13.0	10.0	5.0	Chain	56	26x2½	R.	V Rim.	V Rim.	K.	None.	14	197	70	....
Hawker	4¼	1	3.34x3.81	Ver.	4	33	Black.	L.	C I.	S & P.	M P.	H.	Bur.	3	13.0	10.0	5.0	Chain	56	26x2½	R.	Exp.	Exp.	K.	None.	11	220	75	95
Hudson	2¾	1	2.75x3.54	Ver.	4	20	Own.	O.	Al.	S & P.	M P.	H.	Own.	3	15.0	8.6	5.7	Chain	54	26x2½	R.	Exp.	Exp.	K.	None.	16	230	63	....
Hudson	4½	1	3.42x3.93	Ver.	4	30	Own.	L.	Al.	S & P.	M P.	H.	Own.	3	11.5	6.2	4.5	Chain	56	28x3	R.	Exp.	Exp.	K.	None.	16	260	89	....
Humber	2¾	1	2.95x3.11	Ver.	4	21	Own.	L.	Al.	Spl.	M P.	H.	Own.	3	15.6	9.3	5.6	Chain	54	26x2¼	R.	Exp.	V Rim.	K.	None.	12	200	55	....
James	2¼	1	2.51x3.03	Ver.	4	15	Own.	L.	C I.	Spl.	M P.	H.	Own.	3	15.9	9.0	5.6	Chain	52	26x2¼	R.	Exp.	V Rim.	K.	None.	12	170	45	....
James	2¾	1	2.87x3.28	Ver.	4	21	Own.	L.	C I.	Spl.	M P.	H.	Own.	3	15.0	8.6	5.4	Chain	54	26x2½	R.	Exp.	Exp.	K.	None.	12	260	60	....
James	3½	2	2.51x2.63	Vee.	4	36	Own.	L.	C I.	Spl.	M P.	H.	Own.	3	10.7	7.2	5.2	Chain	56	26x3	R.	Exp.	Exp.	K.	None.	12	290	70	91
James	4¼	1	3.38x4.05	Ver.	4	36	Own.	L.	C I.	Spl.	M P.	H.	Own.	3	10.7	7.2	5.2	Chain	56	26x3	R.	Exp.	Exp.	K.	None.	12	280	72	....
James	7	2	2.87x3.28	Vee.	4	42	Own.	L.	C I.	Spl.	M P.	H.	Own.	3	17.6	9.2	5.2	Chain	56	28x3	R.	Exp.	Exp.	K.	None.	16	310	....	95
J. E. S.	1¾	1	2.36x2.36	Ver.	2	10	Own.	V.	C I.	Spl.	None.	N.	None.	1	No.	No.	6.0	Belt	48	24x2	R.	Rim.	V Rim.	P.	None.	10	120	25	....
J. E. S.	2¼	1	2.67x2.67	Ver.	2	15	Own.	V.	C I.	Spl.	S P.	H.	Bur.	3	14.0	10.0	5.0	Chain	49	26x2¼	R.	Exp.	Exp.	K.	None.	12	160	35	....
J. E. S.	2¾	1	2.80x3.46	Ver.	4	21	Black.	O.	Al.	Spl.	M P.	H.	Bur.	3	12.0	9.0	5.0	Cnain	53	26x2½	R.	Exp.	Exp.	K.	None.	12	190	45	....
Lea Francis	5	2	2.51x3.62	Vee.	4	36	MAG.	I.	C I.	Spl.	M P.	H.	Bur.	3	15.0	9.0	5.5	Chain	58	26x3	R.	V Rim.	V Rim.	K.	None.	14	175	87	114
Levis	2¼	1	2.44x2.75	Ver.	2	12	Own.	V.	C I.	S & P.	S P.	H.	Bur.	2	....	No.	....	Ch & B.	51	24x2¼	R.	Exp.	V Rim.	K.	None.	10	130	42	....
Levis	2½	1	2.63x2.75	Ver.	2	15	Own.	V.	C I.	S & P.	M P.	H.	St Ar.	3	13.8	7.1	4.7	Chain	51	24x2¼	R.	Exp.	Exp.	K.	None.	10	150	55	....
McKenzie	1½	1	2.16x2.44	Ver.	2	9	Own.	V.	C I.	Fuel.	M P.	H.	Albion	2	13.0	No.	6.5	Ch & B.	48	26x2	R.	Rim.	V Rim.	K.	None.	12	125	30	....
Matchless	3	1	2.71x3.89	Ver.	4	21	Own.	O.	Al.	S & P.	M P.	H.	St Ar.	3	15.8	8.0	5.4	Chain	55	26x2½	R.	Exp.	Exp.	K.	None.	16	220	65	....
Matchless	5	1	3.50x3.75	Ver.	4	34	Own.	O.	Al.	S & P.	M P.	H.	St Ar.	3	13.4	6.9	4.6	Chain	57	26x3	R.	Exp.	Exp.	K.	None.	16	260	67	85
Matchless	8	2	3.36x3.34	Vee.	4	59	J A P.	L.	C I.	S & P.	M P.	H.	St Ar.	3	13.4	6.9	4.6	Chain	57	26x3	R.	Exp.	Exp.	K.	None.	16	300	....	95
Matchless	8	2	3.22x3.70	Vee.	4	59	Own.	I.	C I.	S & P.	M P.	F.	Own.	3	12.9	7.7	4.6	Chain	62	28x3	S.	Exp.	Exp.	K.	Elec.	16	350	....	158
Nor-a-Car	2¾	1	2.75x2.91	Ver.	2	17	Own.	V.	C I.	Fuel.	Fric.	H.	Own.	3	11.0	6.5	4.9	Chain	59	26x2¼	R.	Exp.	Exp.	K.	Elec.	14	190	57	....
Norton	3½	1	3.11x3.93	Ver.	4	30	Own.	O.	Al.	Spl.	M P.	H.	St Ar.	3	7.2	5.6	4.4	Cnain	56	26x2½	R.	Exp.	V Rim.	K.	None.	9	252	89	....
Norton	4	1	3.22x4.72	Ver.	4	38	Own.	L.	C I.	Spl.	M P.	H.	St Ar.	3	12.5	7.6	4.6	Chain	59	28x3	R.	Exp.	V Rim.	K.	None.	16	278	76	....
P. & M.	3½	1	3.30x3.54	Ver.	4	30	Own.	O.	Al.	S & P.	M P.	H.	Own.	4	16.0	12.0	7.0	Cnain	54	28x3	R.	V Rim.	V Rim.	K.	Elec.	22	275	75	....
Quadrant	3½	1	3.11x3.93	Ver.	4	29	Own.	L.	C I.	Spl.	M P.	H.	Bur.	3	12.5	8.0	5.0	Chain	56	26x2½	R.	Exp.	V Rim.	K.	None.	16	225	50	68
Quadrant	4½	1	3.34x4.33	Ver.	4	38	Own.	L.	C I.	Spl.	M P.	H.	Bur.	3	14.7	8.5	5.3	Chain	57	28x3	R.	Exp.	V Rim.	K.	None.	16	280	55	75
Radco	2½	1	2.60x2.75	Ver.	2	15	Own.	V.	C I.	Spl.	M P.	H.	Bur.	2	11.5	No.	5.7	Ch & B.	52	24x2	R.	Rim.	Con.	K.	None.	8	158	28	....
Raleigh	2¾	1	2.79x3.46	Ver.	4	21	Own.	L.	Al.	Spl.	S P.	H.	St Ar.	3	16.2	8.6	5.6	Chain	53	26x2½	R.	V Rim.	Exp.	K.	None.	14	210	50	....
Raleigh	7	2	2.99x3.46	Vee.	4	48	Own.	L.	C I.	S & P.	M P.	H.	St Ar.	3	16.2	8.6	5.6	Chain	55	26x3	R.	V Rim.	Exp.	K.	None.	20	285	73	....

ABBREVIATIONS.

•—4 valves per cylinder
Acet—Acetylene
Al—Aluminum
Albi—Albion
Bur—Burman
C—Hand starting by crank
Ch&B—Chain and Belt
CI—Cast Iron
Con—Contracting Band
Elec—Electric
Exp—Expanding Shoes
F—Foot
Fric—Friction Drive
Fuel—Mixed Oil with Fuel
H—Hand
Hor—Horizontal
I—Overhead inlet side exhaust
Inc—Inclined
K—Kick start
L—Valves at side
MP—Multiple Disk
N } —None
No }
O—Both Valves Overhead
P—Push start
Pres—Pressure to crankshaft bearings
R—Rigid at rear
S—Sprung at rear
S&P—Splash and Pressure
SP—Single Plate
Spl—Splash
St Ar—Sturmey Archer
V—Valveless 2 stroke
Ver—Vertical

British Motorcycle Specifications—Continued

NAME	ENGINE										TRANSMISSION								MISCELLANEOUS										PRICES	
	Manufacturers' H.P. Rating	Number of Cyls.	Bore and Stroke (Ins.)	Cylinder Arrangement	Cycle Type	Piston Displacement (Cu. In.)	Make	Valve Arrangement	Piston Material	Oiling System	Clutch: Type	Clutch: Controlled By	Gearset: Make	Gearset: Number of Speeds	Gear Ratios: Low	Gear Ratios: Second	Gear Ratios: High	Drive	Wheelbase (Ins.)	Tire Size (Ins.)	Frame Type	Brakes: Front	Brakes: Rear	Starting System	Lighting System	Fuel Tank Capacity (Pints)	Weight Solo M/c (Lbs.)	Solo £	Standard Combination £
Rover	2½	1	2.50x3.10	Ver...	4	15	Own..	O...	C I.	S & P.	M P..	H...	Own..	3	17.0	10.2	6.1	Chain...	52	26x2¼	R...	Exp....	Exp....	K...	Elec..	10	220	55	....
Rudge	2¾	1	2.75x3.50	Ver...	4	21	Own*	O...	Al..	S & P	M P..	H...	Own..	4	16.8	11.0	6.9	Chain...	52	26x2½	R ..	V Rim..	V Rim..	K...	Elec..	21	240	55	....
Rudge	3½	1	3.31x3.46	Ver...	4	30	Own*	O...	Al..	S & P.	M P..	H...	Own..	4	16.3	11.0	7.1	Chain...	57	26x2½	R...	V Rim..	V Rim..	K...	Elec..	21	280	65	....
Rudge	7	2	3.34x3.46	Vee...	4	60	Own..	I...	Al..	Spl...	M P..	H...	Own..	4	13.0	8.8	6.0	Chain...	57	28x2¾	R...	V Rim..	V Rim..	K...	Elec..	21	306	75	....
Scott	3½	2	2.75x2.50	Inc...	2	31	Own..	V...	Al..	Spl...	M P..	H...	Own..	3	11.6	6.3	4.1	Chain...	55	28x3	R...	Exp....	Exp....	K...	Acet..	24	235	85	105
Scott	3¾	2	2.90x2.50	Inc...	2	32	Own..	V...	C I.	Spl...	Exp..	F...	Own..	2	8.0	No..	4.2	Chain ..	53	28x3	R...	Exp....	Exp....	K...	Acet..	24	230	75	99
Sunbeam	2¾	1	2.75x3.54	Ver...	4	20	Own..	L...	C I.	S & P.	M P..	H...	Own..	3	15.5	9.3	5.6	Chain...	52	26x2⅜	R...	V Rim..	V Rim..	K...	None..	10	215	78	....
Sunbeam	3½	1	3.14x3.85	Ver...	4	30	Own..	O...	Al..	Pres..	M P..	H...	Own..	3	13.4	7.8	4.9	Chain...	55	26x2½	R...	V Rim..	V Rim..	K...	None..	14	265	86	....
Sunbeam	4¼	1	3.46x4.15	Ver...	4	36	Own..	L...	C I.	S & P.	M P..	H...	Own..	4	....	....	....	Chain...	57	26x2½	R..	V Rim..	Exp....	K...	None..	14	280	110	....
Triumph	2½	1	2.64x2.75	Ver...	2	15	Own..	V...	C I.	Fuel..	S P...	H...	Own..	2	8.4	No..	5.0	Ch & B.	48	24x2¼	R..	Rim....	V Rim..	K...	Elec..	9	145	51	....
Triumph	3	1	2.83x3 34	Ver...	4	21	Own..	L...	Al..	S & P.	M P..	H...	Own..	3	12.5	8.3	5.5	Chain...	51	26x2½	R...	Exp....	V Rim..	K...	Elec..	16	200	69	....
Triumph	3½	1	3.16x3.81	Ver...	4	30	Own*	O...	Al..	Spl...	M P..	H...	Own..	3	12.4	7.4	5.5	Chain...	56	26x3..	R...	Exp....	V Rim..	K...	Elec..	16	240	112	....
Triumph	4	1	3.34x3.81	Ver...	4	33	Own..	L...	C I.	Spl...	M P..	H...	Own..	3	13.1	8.0	4.7	Chain...	56	26x3	R...	Exp	V Rim..	K...	Elec..	16	242	107	....
Velocette	2½	1	2.48x3.15	Ver...	2	15	Own.	V...	C I.	Spl...	S P...	H...	Own..	2	9.0	No..	5.0	Cu & B.	52	26x2¼	R...	Exp....	V Rim..	K...	None..	14	150	42	....
Victor	4	2	2.75x3.10	Hor...	4	36	Own..	L...	C I.	S & P.	M P..	H...	St Ar.	3	11.5	8.0	5.3	Chain...	55	26x3	R...	Exp....	V Rim..	K...	Elec..	20	242	80	95
Victor	6	2	2.95x3.10	Hor...	4	41	Own..	L...	Al..	S & P.	M P..	H...	St Ar.	3	11.5	8.2	5.0	Chain...	54	28x3	R..	Exp....	Exp....	K...	Elec..	24	270	97	110
Wooler	2¾	2	2.38x2.36	Hor...	4	21	Own..	O...	Al..	S & P.	Cone..	H...	Own..	3	10.2	8.3	5.4	Chain...	56	26x2¼	S...	Con....	Exp....	K...	None..	16	193	68	85
Wooler	2¾	2	2.38x2.36	Hor...	4	21	Own..	I...	C I.	S & P.	Cone..	H...	Own..	3	17.4	8.2	5.4	Chain...	56	26x2¼	S...	Con....	Exp....	K...	None..	16	190	60	77
Wooler	3½	2	2.59x2.87	Hor...	4	30	Own..	O...	Al..	S & P.	Cone..	H...	Own..	3	10.2	8.2	5.4	Chain...	57	26x2½	S...	Con.....	Exp....	K...	None..	16	195	77	95
Zenith	2¾	1	2.9 x3.10	Ver...	4	20	J A P.	O..	Al..	S & P.	M P..	H...	St Ar.	3	11.4	7.6	5.9	Chain..	54	26x2½	R...	Exp....	V Rim..	K...	None..	12	230	70	....
Zenith	3	1	2.75x3.54	Ver...	4	20	J A P.	L...	C I.	S & P.	M P..	H...	St Ar.	3	17.5	9.0	6.0	Chain...	54	26x2¼	R..	Exp....	V Rim..	K...	None..	12	246	52	....
Zenith	3½	2	2.67x2.67	Hor...	4	30	Brad..	O...	Al..	S & P.	M P..	H..	St Ar.	3	13.8	7.1	4.7	Chain...	58	26x2½	R..	Exp....	V Rim..	K...	None..	16	251	75	....
Zenith	5	2	2.75x3.46	Vee...	4	41	J A P.	L...	C I.	S & P.	M P..	H...	St Ar.	3	15.3	7.8	5.2	Chain...	58	26x2½	R..	Exp....	V Rim..	K...	None..	16	280	80	....
Zenith	8	2	3.36x3.34	Vee...	4	60	J A P.	L...	Al..	S & P.	M P..	H...	St Ar.	3	13.0	6.7	4.4	Chain...	59	28x3	R...	V Rim..	V Rim..	K...	None..	18	315	120	....

ABBREVIATIONS—
*—4 valves per cylinder
Acet—Acetylene
Al—Aluminum
Albi—Albion
Bur—Burman
C—Hand starting by crank
Ch&B—Chain and Belt
CI—Cast Iron
Con—Contracting Band
Elec—Electric
Exp—Expanding Shoes
F—Foot
Fric—Friction Drive
Fuel—Mixed Oil with Fuel
H—Hand
Hor—Horizontal
I—Overhead inlet side exhaust
Inc—Inclined
K—Kick start
L—Valves at side
MP—Multiple Disk
N } —None
No }
O—Both Valves Overhead
P—Push start
Pres—Pressure to crankshaft bearings
R—Rigid at rear
S—Spring at rear
S&P—Splash and Pressure
SP—Single Plate
Spl—Splash
St Ar—Sturmey Archer
V—Valveless 2 stroke
Ver—Vertical

British Agricultural Tractor Specifications

MAKE	ENGINE							TRANSMISSION										BELT PULLEY					SPEEDS (M.P.H.)			
	Make	Number of Cylinders, Bore and Stroke (Ins.)	Normal R.P.M.	Oiling System	Oil Pump Type	Fuel	Clutch Type	Final Drive	Wheels: Number of Driving	Wheels: Number of Non-Driving	Wheels: Diameter and Width (Driving) ins.	Driving Axle Type	Wheelbase (Ins.)	Frame Type	Weight (Lbs.)	Water Injected?	Air Cleaner Type	Diameter (Ins.)	Width (Ins.)	R. P. M.	Location	Number of Forward Speeds	Low	Second	High	Reverse
Austin	Own....	4-3¾x5	1500	Pr Cs.	Gear....	Opt...	Cone..	Spur..	2	2	42x10	Live..	68	None..	3136	No....	Wet...	24	6	360	Side...	2	2½	....	4¼	2
Blackstone	Own....	3-5 x6½	750	Pr Cs.	Plun....	Ker...	Cone..	Spur..	C...	C.....	.....	Sta.....	....	R S...	5300	Yes...	Wet...	10–17	6	500	Side...	3	1¾	2¾	3½	1½
Crawley*	Own....	4-4½x5½	950	Pr Cs.	Gear....	Gas...	Cone..	Spur..	2	1	18x8	Sta.....	....	R S...	4700	No...	None..	14	6	550	Rare..	2	2¾	....	3½	1½
Fowler*	Own....	4-3½x5	1000	Pr Cs.	Gear....	Gas...	S P...	Spur..	2	1	44x6	Sta...	114	Plate..	2820	No...	None..	6	3½	1000	Side...	2	1¾	....	2½	1¼
Fowler*	Own....	4-4 x5¼	1000	Pr Cs.	Gear....	Gas...	S P...	Spur..	2	1	54x8	Sta...	118	R S...	5040	No...	None..	8	4¾	1000	Side...	2	1¾	....	2½	1¼
Fowler*	Own....	4-4½x6¼	1000	Pr Cs	Gear....	Gas...	S P...	Spur..	2	2	63x8	Sta...	142	R S...	5600	No...	None..	12	6½	1000	Side...	3	1¾	2¾	3¾	1½
Fowler	Own....	4-4 x5¼	1000	Pr Cs.	Gear....	Gas...	M D..	D R..	2	2	48x10	Live..	77	None..	4480	No...	None..	12	6	900	Side...	3	2	3	4	2
Fowler	Own....	4-4½x6¼	1000	Pr Cs.	Gear....	Gas...	M D..	D R..	2	2	48x12	Live..	93	None..	6160	No...	None..	12	6	900	Side...	3	2	3	4	2
Fowler	Own....	4-5 x6¼	850	Sp Pr.	Plun....	Gas...	M D..	D R..	2	2	48x12	Live..	100	None.	7840	No...	None..	16	6½	690	Side...	3	2	3	4	2
Fowler	Own....	4-5 x7	850	Sp Pr.	Plun....	Gas...	M D..	D R..	2	2	72x16	Live..	150	None..	15680	No...	None..	16	6½	690	Side...	3	2	3	4	2
Fowler	Own....	4-5¾x7½	750	Sp P..	Plun....	Gas...	M D..	D R..	2	2	72x16	Live..	150	None..	20160	No...	None..	24	7	400	Side...	3	2	3	4	2
Glasgow	Cont....	4-4½x5¼	1150	Spla..	Plun....	Ker...	Cone..	Bevel.	3	....	39x12	Live..	75	None.	4144	No...	Dry...	9	6	1150	Side...	2	2½	....	4½	1¾
Martin	Gall....	4-4¼x5½	1000	Spla..	Plun....	Ker...	Cone..	Spur..	2	2	52x12 / 8½	Sta...	86	R S...	5600	No...	Wet...	18	6	450	Side...	2	2	....	3½	2
Peterboro	Ricardo.	4-4¾x5½	950	Pr Cs.	Plun....	Ker...	Cone..	Spur..	2	2	54x10	Live..	87	R S...	5600	No...	Dry...	12	6	900	Rear..	2	1⅞	....	2¾	1⅜
Saunderson	Own....	2-4½x6½	1000	Spla..	None...	Ker...	Cone..	Chain.	2	2	42x8	Sta...	88	R S...	3200	No...	None..	11	5	900	Side...	2	2	....	3	2
Saunderson	.....	2-5½x8	750	Pr Cs.	Gear....	Ker...	Cone..	Spur..	2	2	48x10	Live..	90	R S...	5824	No...	None..	12	7	750	Side...	3	1⅝	2⅛	4¼	2⅛
Wallis (British)	Ruston..	4-4¼x5¾	850	Spla..	Plun....	Ker...	S P...	Spur..	2	2	48x12	Live..	84	None.	4212	Yes...	Wet...	18	6	430	Side...	2	2½	....	3½	2½
Weeks	Wauk...	4-4¼x5¾	900	Spla..	Gear....	Ker...	S P...	Spur..	2	2	40x10	Live..	60	R S...	3920	No...	Dry...	8	6	900	Rear..	3	1¾	2¾	4½	1½

ABBREVIATIONS:
*—Self contained plow
C—Crawler type
Cont—Continental
DR—Double Reduction (bevel and spur)
Gall—Galloway
Gas—Gasoline
Ker—Kerosene
MD—Multiple Dry Plate
Opt—Optional
Plun—Plunger
PrCs—Pressure fed through hollow crankshaft
SP—Single Dry Plate
SpPr—Pressure to main crankshaft bearings only
Spla—Splash
Sta—Stationary
Wauk—Waukesha

American Agricultural

MAKE AND MODEL	GENERAL										ENGINE																
																		Governor		Ignition		Fuel System					
	Price	Capacity: No. of 14" Plows	Plowing Speed (M. P. H.)	Wgt. Complete (Lbs.)	Wheel Base (Ins.)	Minimum Turning Diameter (Ft.)	Ground Clearance (Ins.)	Drawbar Type	Drawbar—Belt Rating	Steering Type	Make	Rated Horsepower (N.A.C.C.)	Number Cylinders	Bore and Stroke	Engine Type	No. of Cyls. per Casting	Valve Arrangement	Normal R.P.M. at Plowing Speed	Make	Type	Make of System	Impulse Starter Fitted?	Make and Size of Carbureter (Ins.)	Fuel Feed	Number and Capacity of Fuel Tanks (gals.)	Water Injected?	Make of Air Cleaner
Adv.-Rumely OilPull K	....	3	2.90	6638	80	14′ 0″	13⅜	Hor.	12-20	F.A.K.	Own.	28.80	2	6 x8	Hor.	2	IH.	566	Own.	Cent.	Bosch.	Yes.	Own 2¼	Pres.	2-1G-23K	Yes.	Don.
Adv. Rumely OilPull H	....	4	2.10	9506	92½	17′ 0″	15½	Hor.	16-30	F.A.K.	Own.	39.20	2	7 x8½	Hor.	2	IH.	530	Own.	Cent.	Bosch.	Yes	Own 2½	Pres.	2-1G-34K	Yes.	Don.
Adv.-Rumely OilPull G	....	6	2.00	12968	103	21′ 0″	17⅜	Hor.	20-40	F.A.K.	Own.	51.20	2	8 x10	Hor.	1	IH.	450	Own.	Cent.	Bosch.	Yes	Own 2¾	Pres.	2-1G-41K	Yes.	Don.
Adv.-Rumely OilPull E	....	8-10	1.90	26000	141	....	15	Hor.	30-60	S.A.	Own	80.00	2	10 x12	Hor.	1	IH.	375	Own.	Cent.	Bosch.	No.	Own 3¼	Pres.	2-3G-70K	Yes.	None.
Allis-Chalmers	$325	1	2.40	2500	81	9′ 11″	26½	Ver.	5-12	T.D.M.	LeRoi.	15.63	4	3½x4½	Ver.	4	"L"H.	1200	LeRoi.	Cent.	Dixie.	No.	King ⅞	Gra.	1-G- 8½	No.	Ben.
Allis-Chalmers	1285	3	2.50	4700	78	12′ 0″	13	Uni.	15-25	F.A.K.	Midw.	27.23	4	4½x5¼	Ver.	2	IH.	1100	Own.	Cent.	Dixie.	Yes.	King 1¼	Gra.	1-G-20	No.	Taco.
Allis-Chalmers	1885	4	2.50	6150	94	12′ 0″	11½	Uni.	20-35	F.A.K.	Own.	36.10	4	4¼x6½	Ver.	4	IH.	930	Own.	Cent.	Dixie.	Yes.	King 1½	Gra.	3-G-40	No.	Taco.
Allwork C	1295	3	2.75	5200	80	12′ 0″	14	Uni.	16-30	F.A.K.	Own.	40.00	4	5 x6	Ver.	1	"L"H.	900	Own.	Cent.	Bosch.	Yes.	King 1½	Gra.	2-5G-25K	No.	Ben.
Allwork G	1495	3	2.75	4800	75	9′ 6″	13	Uni.	14-28	F.A.K.	Own.	36.10	4	4¾x6	Ver.	1	"L"H.	900	Own.	Cent.	Bosch.	Yes.	King 1½	Gra.	2-5G-25K	No.	Ben.
Allwork D	1695	4-5	2.75	6500	80	26′ 0″	14	Ver.	20-38	F.A.K.	Own.	40.00	4	5 x7	Ver.	1	"L"H.	900	Own.	Cent.	Bosch.	Yes.	King 1 ½	Gra.	2-5G-25K	No.	Ben.
Aultman-Taylor	3100	4- 6	2.20	12500	102	28′ 0″	12	Hor.	22-45	S.A.	Own.	48.40	4	5½x8	Hor.	2	IH.	600	Own.	Cent.	Eise.	Yes.	King 2	Gra.	2-20G-50K	Yes.	None.
Aultman-Taylor	4400	8-10	2.20	22500	125	32′ 0″	13	Hor.	30-60	S.A.	Own.	78.40	4	7 x9	Hor.	2	IH.	550	Own.	Cent.	Eise.	Yes.	King 2½	Gra.	2-20G-60K	Yes.	None.
Avery	....	3- 4	2.50	4500	70	....	....	Hor.	15-	F.A.K.	Own.	32.40	4	4½x6	Hor.	4	IH.	....	Pierce.	Cent.	K.W.	Yes.	Strom 1¼	Gra.	2-2G-16K	No.	Ben.
Avery	....	4- 5	3.00	7500	80	12′ 0″	16	Hor.	20-35	F.A.K.	Own.	38.03	4	4⅞x7	Hor.	4	IH.	700	Own.	Cent.	K.W.	Yes.	King 1½	Gra.	2-3½G-30K	Yes.	.....
Avery	....	5- 6	4.00	12500	114	20′ 0″	16	Hor.	25-50	S.A.	Own.	67.60	4	6½x7	Hor.	2	IH.	700	Own.	Cent.	K.W.	Yes.	King 2	Gra.	2-5G-50K	Yes.	.....
Avery	....	8-10	3.00	22000	138	20′ 6″	20	Hor.	45-65	S.A.	Own.	96.10	4	7¾x8	Hor.	2	IH.	500	Own.	Cent.	K.W.	Yes.	King 2	Gra.	2-5G-65K	Yes.	.....
‡Avery (Track Runner)	....	3	2.66	5000	.....	9′ 0″	....	Uni.	.....	T.D.M.	Own.	25.60	4	4 x5½	Ver.	4	IH.	1000	Pharo.	Hyd.	K.W.	Yes.	King 1¼	Gra.	2-2G-23K	No.	United
‡Avery...(Road Razer)	....	....	....	4600	.....	....	....	Hor.	.....	F.A.K.	Own.	21.60	6	3 x4	Ver.	6	"L"H.	1250	Own.	Cent.	K.W.	Yes.	King 1	Gra.	1-20G	No.	Ben.
Bates (Steel Mule)...H	....	3	2½3½	3600	82½	20′ 0″	12	Hor.	15-25	F.A.K.	Midw.	27.23	4	4½x5¼	Ver.	2	IH.	1100	Simp..	Cent.	Bosch.	Yes	Ben. 1¼	Gra.	2-8G-10K	....	Pom.
Bates (Steel Mule)...F	....	3	2½3½	4850	80	16′ 0″	12	Hor.	18-25	F.A.K.	Midw.	27.23	4	4½x5¼	Ver.	2	IH.	1100	Simp..	Cent.	Bosch.	Yes	Ben. 1¼	Gra.	2-8G-10K	....	Pom.
Bates (Steel Mule)...G	....	4	2½3½	6500	80½	13′ 6″	12	Hor.	25-35	F.A.K.	Midw.	32.40	4	4½x6	Ver.	2	IH.	1000	Simp..	Cent.	Bosch.	Yes	King 1½	Gra.	1-26G	....	Pom.
‡Bates (Steel Mule) .40	....	....	....	9500	84	14′ 0″	14	Hor.	30-40	T.D.M.	Midw.	36.10	4	4¾x6	Ver.	2	IH.	1000	Simp..	Cent.	Bosch.	Yes	King 1½	Gra.	1-30G	No.	Pom.
Bear I	4250	4	3.80	6700	64	12′ 0″	11	Uni.	25-35	T.D.M.	Stearns	36.10	4	4¾x6½	Ver.	4	IH.	1290	Dupl'x	Cent.	Bosch.	Yes	Scheb 1¾	Gra.	1-40G	No.	Pom.
Best 3	....	4	3.10	8100	.....	12′ 0″	11½	Hor.	20-30	T.D.M.	Own.	36.10	4	4¾x6½	Ver.	1	IH.	800	Own.	Cent.	Bosch.	Yes	Ensign1½	Gra.	2-2½G-28K	No.	Pom.
Best 6	....	8	2.62	18580	.....	18′ 0″	14	Hor.	40-60	T.D.M.	Own.	67.60	4	6½x8½	Ver.	1	IH.	650	Own.	Cent.	Bosch.	Yes	Ensign 2	Vac	2-3G-56K	No.	Pom.
Bryan.....Steam	2385	3	2.50	5500	88	14′ 0″	15	Hor.	15-30	F.A.K.	Own.	20.00	2	4 x5	Hor.	2	Slide.	300	Pick.	Cent.	None.	No.	None	Pres.	1-30K	No.	None.
Case	895	3	2.60	4230	65	24′ 0″	11½	Hor.	12-20	F.A.K.	Own.	27.23	4	4½x5	Ver.	4	IH.	1050	Own.	Cent.	Bosch.	Yes	King 1¼	Gra.	2-2¼G-17¼K	No.	Own.
Case	1350	3- 4	2.75	6600	76½	27′ 3″	14	Hor.	15-27	F.A.K.	Own.	37.40	4	4½x6	Ver.	4	IH.	900	Own.	Cent.	Bosch.	Yes	King 1⅝	Gra.	2-2¾G-20K	Yes.	Own.
Case	6 00	4- 6	2.60	10700	96	40′ 6″	15	Hor.	22-40	F.A.K.	Own.	48.40	4	5½x6¾	Ver.	2	IH.	850	Own.	Cent.	Bosch.	Yes	King 2	Gra.	2-3¾G-26¼K	Yes.	Own.
Case	4900	8-10	2.60	21200	124	52′ 6″	16	Hor.	40-72	F.A.K.	Own.	78.40	4	7 x8	Ver.	2	IH.	750	Own.	Cent.	Bosch.	Yes	King 2½	Gra.	2-9G-52K	Yes.	Own.
Caterpillar 2 Ton	....	3	3.00	4000	.....	11′ 0″	11	Hor.	15-	T.D.M.	Own.	25.60	4	4 x5½	Ver.	4	IH.	1000	Own.	Cent.	Eise.	Yes	King 1¼	Gra.	1-19G	No.	Dailey
‡Caterpillar 5 Ton	....	4	3.00	9400	83	14′ 0″	12	NonA.	25-	T.D.M.	Own.	36.10	4	4¾x6	Ver.	2	IH.	1050	Own.	Cent.	Eise.	Yes	Scheb 1½	Vac.	1-46-G	No.	Strom.
‡Caterpillar 10 Ton	....	6	3.00	19500	98	18′ 0″	17	NonA.	40-	T.D.M.	Own.	67.60	4	6½x7	Ver.	1	IH.	750	Own.	Cent.	Eise.	Yes	King 2	Gra.	1-46-G	No.	Strom.
Cletrac F	815	3	3.00	1930	.....	16′ 0″	8	Hor.	9-16	T.D.M.	Own.	16.90	4	3¼x4½	Ver.	4	"L"H.	1600	Own.	Cent.	Teagle	No.	Tillot 1	Gra.	2-1¼G-6K	No.	Own
Cletrac W	1345	2	3.00	3455	.....	12′ 0″	12	Hor.	12-20	T.D.M.	Own.	25.60	4	4 x5½	Ver.	4	IH.	1265	Own.	Cent.	Teagle	Yes	King 1¼	Gra.	2-3¼G-11K	No.	Own.
Eagle F	....	3	2.00	5850	81	.....	17	Hor.	12-22	S.A.	Own.	39.20	2	7 x8	Hor.	2	IH.	450	Pick.	Cent.	Dixie.	Yes.	Scheb 1½	Gra.	2-4G-12K	Yes.	Own.
Eagle H	....	4	2.00	7100	88	.....	17	Hor.	16-30	F.A.K.	Own.	51.20	2	8 x8	Hor.	2	IH.	450	Pick.	Cent.	Dixie.	Yes.	Scheb 1¾	Gra.	2-5G-18K	Yes.	Own.
E-B AA	....	3	2.70	4550	87½	12′ 6″	11	Hor.	12-20	F.A.K.	Own.	36.10	4	4¾x5	Ver.	2	"L"H.	900	Own.	Cent.	K-W.	Yes.	Strom 1½	Gra.	2-4G-20K	Yes.	Ben.
E-B Q	....	3	2.26	6500	93	15′ 0″	15	Hor.	12-20	F.A.K.	Own.	36.10	4	4¾x5	Ver.	2	"L"H.	850	Pick.	Cent.	K-W.	Yes.	Ben. 1½	Gra.	2-4G-16K	Yes.	Ben.
E-B	....	4	2.26	9400	126	22′ 0″	16	Hor.	16-32	S.A.	Own.	44.10	4	5¼x7	Ver.	2	"L"H.	750	Pick.	Cent.	Simms	Yes.	Strom 1¾	Gra.	2-5G-35K	Yes.	Ben.
Fageol	1175	2	2.33	3600	77	.....	....	Hor.	9-12	F.A.K.	Lyco.	19.60	4	3½x5	Ver.	4	"L"H.	1200	.....	Cent.	Dixie.	Yes.	Tillot 1	Gra.	1-12G	No.	Own.
Fordson	420	2	2.75	2562	63	21′ 0″	11⅜	Hor.	-18	F.A.K.	Own.	25.60	4	4 x5	Ver.	4	"L"H.	1000	None.	None.	Own.	No.	Holley 1¼	Gra.	2-1½G-21K	Yes.	Own.
Frick	....	2	2.30	5800	92	12′ 6″	15	Hor.	12-20	F.A.K.	Erd.	25.60	4	4 x6	Ver.	4	IH.	900	Erd.	Cent.	King.	Yes.	King 1¼	Gra.	2-3G-20K	No.	King.
Frick	....	3	2.13	6730	92	12′ 6″	16	Hor.	15-28	F.A.K.	Beav.	36.10	4	4¾x6	Ver.	4	IH.	900	Taco.	Cent.	Dixie.	Yes.	Ben. 1½	Gra.	2-3G-20K	No.	United
Gray	....	4	3.14	6930	140	12′ 6″	18	NonA.	22-40	F.A.K.	Wauk.	32.40	4	5x6¼	Ver.	2	"L"H.	1000	Wauk.	Cent.	Bosch.	Yes	Ben. 1½	Gra.	1-35G	No.	Ben.
Hart-Parr 20	....	2	3.00	4250	76	22′ 0″	11⅜	Hor.	-20	F.A.K.	Own.	24.20	2	5½x6½	Hor.	2	IH.	800	Own.	Cent.	K-W.	Yes.	Scheb 1½	Gra.	2-1G-14K	Yes.	Own.
Hart-Parr 30	....	3	3.00	5220	83	24′ 0″	11⅜	Hor.	-30	F.A.K.	Own.	33.80	2	6½x7	Hor.	2	IH.	750	Own.	Cent.	K-W.	Yes.	Scheb 1½	Gra.	2-1G-23K	Yes.	Own.
‡Hart-Parr...(Road)	....	3	3 00	7560	83	24′ 0″	11⅜	Hor.	-30	F.A.K.	Own.	33.80	2	6½x7	Hor.	2	IH.	750	Own.	Cent.	K-W.	Yes.	Scheb 1½	Gra.	2-1G-23K	Yes.	Own.
Hart-Parr 40	....	4	3 11	7510	91	24′ 0″	11⅜	Hor.	-40	F.A.K.	Own.	45.00	4	6¼x6½	Hor.	2	IH.	750	Own.	Cent.	K-W.	Yes.	Scheb 1½	Gra.	1-29K	Yes.	Own.
Heider D	628	2	2.50	4000	90	25′ 0″	12	Uni.	9-16	F.A.K.	Wauk.	28.90	4	4¼x5¾	Ver.	2	"L"H.	1000	Wauk.	Cent.	Dixie.	Yes.	King 1...	Gra.	2-7G-14K	Yes.	Ben.
Heider C	725	3	2.50	6000	96	25′ 0″	12	Uni.	12-20	F.A.K.	Wauk.	32.40	4	4½x6¾	Ver.	2	"L"H.	900	Wauk.	Cent.	Dixie.	Yes.	King 1¼	Gra.	2-7G-14K	Yes.	Ben.
Heider M-2	....	2	2.50	2800	80	4′ 8″	30	Hor.	5-10	F.A.K.	LeRoi.	15.63	4	3½x4½	Ver.	4	"L"H.	1000	LeRoi.	Cent.	Dixie.	Yes.	King ⅞	Gra.	1-9G	No.	Ben.
Huber....(Light Four)	985	3	2.50	5000	91	12′ 0″	16	Uni.	12-25	F.A.K.	Wauk.	32.40	4	4½x5¾	Ver.	2	"L"H.	1000	Wauk.	Cent.	King.	Yes.	King 1¼	Gra.	2-2½G-22K	Yes.	Ben.
Huber.....(Super 4)	....	3	2.80	6000	91	12′ 3″	16	Uni.	15-30	F.A.K.	Midw.	32.40	4	4½x6	Ver.	2	IH.	1100	Taco.	Cent.	Eise.	Yes.	King 1¼	Gra.	1-24½G	No.	United
LaCrosse M	....	1	2.50	3000	72	8′ 6″	30	Hor.	6-12	F.A.K.	Own.	12.80	2	4 x6	Hor.	2	IH.	1000	Own.	Cent.	A-K.	....	King-1¼	Gra.	2-1G-13K	No.	.....
LaCrosse H	....	3	3.00	3800	90	9′ 6″	14	Hor.	12-24	F.A.K.	Own.	28.80	2	6 x7	Hor.	2	IH.	900	Own.	Cent.	A-K.	....	King 1¾	Gra.	2-5G-25K	Yes.	Ben.
Lauson S	1295	3	3.00	4200	78	13′ 0″	....	Hor.	12-25	F.A.K.	Midw.	27.23	4	4½x5¼	Ver.	2	IH.	1200	Taco.	Cent.	Dixie.	Yes.	King 1¼	Gra.	1-20G	No.	Taco.
Lauson T	1675	4	2.50	6200	86	14′ 0″	12	Hor.	15-30	F.A.K.	Beav.	36.10	4	4¾x6	Ver.	4	IH.	1000	Taco.	Cent.	Dixie.	Yes.	King 1⅝	Gra.	2-5G-15K	No.	Taco.
Leader I	4375	2	2.50	4800	84	15′ 0″	18	Hor.	12-18	F.A.K.	Own.	28.80	2	6¼x6	Opp.	1	"L"H.	800	Own.	Cent.	King.	Yes.	King 1½	Gra.	2-2½G-18K	Yes.	Own.
Leader N	1275	3- 4	2.25	5800	76	15′ 0″	8	Hor.	16-32	F.A.K.	Climax	40.00	4	5 x6	Ver.	2	"L"H.	800	Climax	Cent.	Eise.	Yes.	Strom 1½	Gra.	2-3½G-30K	No.	Ben.
Lincoln A	1600	3	2.50	5000	90	30′ 0″	15	Ver.	15-30	F.A.K.	Buda.	32.40	4	4½x6	Ver.	4	"L"H.	950	Pierce.	Cent.	Split.	Yes.	Strom 1¼	Gra.	2-5G-20K	No.	Stayn.
Little Giant E	....	4	2.50	5200	87	14′ 0″	12½	Hor.	16-22	F.A.K.	Own.	32.40	4	4½x5	Ver.	2	"L"H.	900	Own.	Cent.	King.	Yes.	King 1½	Gra.	2-5G-25K	No.	Don.
Little Giant A	....	6	2.50	8700	102	16′ 0″	14½	Hor.	26-35	F.A.K.	Own.	48.40	4	5½x6	Ver.	2	"L"H.	700	Pick.	Cent.	King.	Yes.	King 2	Gra.	2-5G-20K	No.	Don.
Lombard	....	12-16	....	19000	168	23′ 0″	10	Hor.	-100	F.A.K.	Own	79.35	6	5¾x7	Ver.	2	"L"H.	1200	Special	Cent.	Special	....	Special	Vac.	1-65G	No.	.....
London	....	3	2.40	.....	83	9′ 0″	....	Uni.	12-25	.....	Midw.	27.23	4	4½x5¼	Ver.	4	I.H.	1200	Taco.	Cent.	K-W.	....	Colum1¼	Gra.	1-24G	.....	.....
McCormick-Deering	....	2	3.00	3700	78	15′ 0″	....	Uni.	8-16	F.A.K.	Own.	28.90	4	4¼x5	Ver.	1	IH.	1000	Own.	Cent.	Dixie.	Yes.	Ensign	Gra.	2-¾G-14½K	No.	Own.
McCormick-Deering	....	3	3.00	5750	85	15′ 0″	11	Uni.	15-30	F.A.K.	Own.	32.40	4	4½x6	Ver.	1	IH.	1000	Own.	Cent.	Split.	Yes.	Ensign	Gra.	2-1G-17K	Yes.	Own.
Minneapolis	....	3	2.21	6600	100	17′ 1″	....	Hor.	12-25	F.A.K.	Own.	32.40	4	4½x7	Ver.	4	IH.	750	Own.	Cent.	K-W.	....	King 1½	Gra.	2-3G-18.3K	Yes.	Ben.
Minneapolis	....	3- 4	2.75	6400	79⅞	13′ 6″	14	Uni.	17-30	F.A.K.	Own.	36.10	4	4¾x7	Ver.	..	IH.	775	Own.	Cent.	Bosch.	....	King 1¾	Gra.	2-6G-18K	....	Don.
Minneapolis	....	4- 5	2.70	12410	109½	15′ 3″	17	.....	22-44	S.A.	Own.	37.60	4	6 x7	Hor.	2	IH.	700	Own.	Cent.	K-W.	....	King 2	Gra.	2-9G-30K	.....	.....
Minneapolis	....	8-10	2.10	22500	136	20′ 6″	16	NonA.	35-70	S.A.	Own.	87.52	4	7¼x9	Hor.	2	IH.	550	Own.	Cent.	K-W.	....	King 2½	Gra.	2-20G-80K	.....	.....
Moline...(Universal D3)	725	2- 3	3.25	3380	....	16′ 0″	29	Uni.	9-18	Special.	Own	19.60	4	3½x5	Ver.	4	IH.	1400	Remy.	Elec.	Remy.	No.	Holley 1¼	Gra.	1-15G	No.	Ben.
Moline....(Orchard D)	725	2- 3	3.00	3340	.....	16′ 0″	19	Uni.	9-18	Special.	Own.	19.60	4	3½x5	Ver.	4	IH.	1400	Remy.	Elec.	Remy.	No.	Holley 1¼	Gra.	1-15G	No.	Ben.
‡Monarch C	3800	4	2.40	8700	.....	14′ 0″	16	Hor.	20-30	T D M	Beav.	36.10	4	4¾x6	Ver.	4	I.H.	1050	Taco.	Cent.	K-W.	Yes	King 1½	Gra.	2-5G-20K	Yes.	Ben.
‡Monarch E	5000	....	....	12000	.....	14′ 0″	16	Hor.	25-40	T.D.M	Beav.	36.10	4	4¾x6	Ver.	4	I.H.	1200	Pharo.	Hyd.	Bosch	Yes	Strom 1¼	Vac.	1-45G	Yes.	Ben.
‡Monarch D	6000	....	....	15000	.....	16′ 0″	12	Hor.	35-60	T.D.M.	Beav.	54.15	6	4¾x6	Ver.	2	I.H.	1200	Pharo.	Hyd.	Bosch.	Yes.	Strom 1¾	Vac.	1-45G	Yes.	Ben.

ABBREVIATIONS:

‡—Industrial Tractor

Drawbar Type:
Hor—Horizontal
Ver—Vertical
Uni—Universal
Non-A—Non-Adjustable

Steering Gear Type:
F. A. K.—Front Axle Knuckle
S. A.—Swinging Axle
T. D. M.—Thru Driving Members

ENGINE:
Midw—Midwest
Lyco—Lycoming
Beav—Beaver
Wauk—Waukesha
Weld—Weidley
Wis—Wisconsin
Ver—Vertical
Hor—Horizontal
Opp—Opposed
"L" H—"L" Head
"T" H—"T" Head
I. H.—In Head
Pick—Pickering
Cent—Centrifugal
Elec—Electrical
Suct—Suction
Hyd—Hydraulic
Eise—Eisemann
Split—Splitdorf
A-K—Atwater-Kent
King—Kingston
Ben—Bennett
Strom—Stromberg
Tillot—Tillotson
Scheb—Schebler
Colum—Columbia
Gra—Gravity
Pres—Pressure
Vac—Vacuum
G—Gasoline
K—Kerosene
Stayn—Staynew
Rains—Rainstrom
Don—Donaldson
Ben—Bennett

Tractor Specifications

ENGINE						CLUTCH		BELT PULLEY				TRANSMISSION															
Oiling System		Cooling System																									
Type of System	Type of Pump	Make of Radiator	Circulation By	Capacity of System (Gals.)	Fluid	Make	Type	Diameter (Ins.)	Face (Ins.)	Normal R.P.M.	Clutch Type	Make	Type	Number of Forward Speeds	Final Drive	Diameter and Face Traction Members (Ins.)	Drive from Gearset to Traction Members	Drive Taken Through	Drive Wheel Axle Type	Does Differential Lock	Type: Drive Shaft Axle Bearings	Individual Brakes for Steering?	Individual Clutches for Steering?	Number of Non-Drive Wheels	Frame Type	MAKE AND MODEL
M.F.M.O.	Pist.	Own.	Pump.	10½	O.	Own.	E.S.	19	7	560	Spec.	Own.	S.G.	2	Wheel.	51–12	S.G.	Rim.	Rev.	No.	Roller.	No.	No.	2	Roll.	Adv.-Rumely OilPull K
M.F.M.O.	Pist.	Own.	Pump.	15	O.	Own.	E.S.	23	8½	530	Spec.	Own.	S.G.	2	Wheel.	56–16	S.G.	Rim.	Rev.	No.	Roller.	No.	No.	2	Roll.	Adv.-Rumely OilPull H
M.F.M.O.	Pist.	Own.	Pump.	17	O.	Own.	E.S.	26	9	450	Spec.	Own.	S.G.	2	Wheel.	64–20	S.G.	Rim.	Rev.	No.	Roller.	No.	No.	2	Roll.	Adv.-Rumely OilPull G
M.F.M.O.	Pist.	Own.	Pump.	70	O.	Own.	E.S.	36	11	375	Spec.	Own.	S.G.	1	Wheel.	80–30	S.G.	Rim.	Dead.	No.	Plain.	No.	No.	2	Roll.	Adv.-Rumely OilPull.
Cir.Spl.	Pist.	Own.	Th-S.	3½	W.	B&B.	S.P.	10	5½	1200	None.	Own.	S.G.	1	Wheel.	48– 6	S.&I.G.	Rim.	Dead.	No.	Plain.	No.	No.	2	No F.	Allis-Chalmers
Hol. Crk.	Gear.	Own.	Pump.	6	W.	Own.	E.S.	12½	6½	817	None.	Own.	S.G.	2	Wheel.	46–12	I.G.	Rim.	Rev.	No.	Roller.	No.	No.	2	No F.	Allis-Chalmers
Hol.Crk.	Gear.	Own.	Pump.	10	W.	Own.	E.S.	13	7½	930	None.	Own.	S.G.	2	Wheel.	50–12	I.G.	Rim.	Rev.	No.	Roller.	No.	No.	2	No F.	Allis-Chalmers
Cir.Spl.	Ecc.	Perf.	Pump.	12	W.	Own.	M.D.D.	13¾	7½	900	M.D.D.	Own.	S.G.	3	Wheel.	48–12	S.G.	Rim.	Rev.	No.	Roller.	No.	No.	2	Roll.	Allwork C
Cir.Spl.	Ecc.	Perf.	Pump.	10	W.	Own.	M.D.D.	11	7	900	M.D.D.	Own.	S.G.	3	Wheel.	48–12	S.&WG	Rim.	Rev.	No.	Roller.	Yes.	No.	2	Roll.	Allwork G
Hol.Crk.	Gear.	Perf.	Pump.	12	W.	Own.	M.D.D.	14	7½	900	M.D.D.	Own.	S.G.	3	Wheel.	48–14	S.G.	Rim.	Rev.	No.	Roller.	No.	No.	2	Roll.	Allwork D
M.F.M.O.	Pist.	Own.	Pump.	80	W.	Own.	C.B.	20	11	600	E.S.	Own.	S.G.	2	Wheel.	70–20	S.G.	Rim.	Rev.	No.	Plain.	No.	No.	2	Roll.	Aultman-Taylor
M.F.M.O.	.....	Own.	Pump.	120	W.	Own.	C.B.	24	11	550	E.S.	Own.	.....	1	Wheel.	90–24	S.G.	Rim.	Rev.	No.	Plain.	No.	No.	2	Roll.	Aultman-Taylor
M.F.M.O.	Gear.	Own.	Pump.	.....	W.	Own.	M.D.D.	16	7⅜	900	M.D.D.	Own.	S.G.	2	Wheel.	50–12	S.G.	Axle.	Live.	No.	Ball.	Yes.	No.	2	Roll.	Avery
M.F.M.O.	Gear.	Own.	Pump.	.....	W.	Own.	M.D.D.	16	7½	900	M.D.D.	Own.	S.G.	2	Wheel.	60–16	S.G.	Spokes	Rev.	No.	Plain.	No.	No.	2	Roll.	Avery
M.F.M.O.	Gear.	Own.	Pump.	55	W.	Own.	M.D.D.	22	8½	700	M.D.D.	Own.	S.G.	2	Wheel.	69–20	S.G.	Spokes	Rev.	No.	Plain.	No.	No.	2	Roll.	Avery
M.F.M.O.	Gear.	Own.	Pump.	.....	W.	Own.	M.D.D.	26	10	600	M.D.D.	Own.	S.G.	2	Wheel.	87½–24	S.G.	Spokes	Rev.	No.	Plain.	No.	No.	2	Roll.	Avery
Hol.Crk.	Gear.	Own.	Pump.	6¾	W.	T.Disc.	S.P.	12	6½	1000	.....	Own.	S.G.	3	Track.	–8½	S.G.	Spokes	Rev.	No.	Ball.	Yes	Yes.	0	Roll.	‡Avery (Track Runner)
Cir.Spl.	Gear.	Own.	Th-S.	6¾	W.	Own.	M.D.D.	.....	.....	.....	.....	Own.	S.G.	3	Wheel.	42– 6	S.G.	Spokes	Dead.	No.	Roller.	Yes.	No.	1	Roll.	‡Avery...(Road Razer)
Hol.Crk.	Gear.	Perf.	Pump.	6	W.	T.Disc.	S.P.	12	8½	850	S.P.	Own.	S.G.	2	Wheel.	48–10	S.G.	Axle.	Dead.	No.	Roller.	.....	.....	2	Roll.	Bates (Steel Mule)...H
Hol.Crk.	Gear.	Perf.	Pump.	6	W.	B&B.	S.P.	12	8½	850	S.P.	Own.	S.G.	2	Track.	56–10	S.G.	Axle.	Dead.	Yes.	Roller.	Yes.	No.	2	Roll.	Bates (Steel Mule)...F
Hol.Crk.	Gear.	Perf.	Pump.	10	W.	T.Disc.	S.P.	12	8½	850	S.P.	Own.	S.G.	2	Track.	56 10	S.G.	Axle.	Dead.	Yes.	Roller.	Yes.	No.	2	Roll.	Bates (Steel Mule)...G
Hol.Crk.	Gear.	Perf.	Pump.	10	W.	B&B.	S.P.	12	8½	850	S.P.	Own.	S.G.	3	Track.	84–12	S.G.	.....	.....	.....	Roller.	Yes.	Yes.	.....	Roll.	‡Bates (Steel Mule). 40
Hol.Crk.	Gear.	Mod.	Pump.	14	W.	M&E.	M.D.D.	12	9	1200	None.	Own.	S.G.	3	Track.	–12	I.G.	.....	.....	.....	Ball.	Yes.	Yes.	8	Roll.	Bear. B
Hol.Crk.	Gear.	Own.	Pump.	11	W.	Own.	M.D.D.	12	8	800	None.	Own.	S.G.	2	Track.	68–11½	B.G.	.....	.....	.....	Roller.	Yes.	Yes.	0	No F.	Best. 30
Cir.Spl.	Gear.	Own.	Pump.	16	W.	Own.	S.P.	16	10	650	None.	Own.	S.G.	3	Track.	89–20	SG-BG.	.....	.....	.....	Roller.	Yes.	Yes.	.....	.....	Best. 60
M.F.M.O.	Pist.	.....	.....	.....	W.	None.	None.	18	7	300	None.	Own.	S.G.	Var.	Wheel.	52–12	S.G.	Axle.	Live.	Yes.	Roller.	No.	No.	2	Roll.	Bryan. Steam
Hol.Crk.	Gear.	Own.	Pump.	10	W.	T.Disc.	S.P.	14¼	5⅜	1050	S.P.	Own.	S.G.	2	Wheel.	42–12	S.G.	Spokes	Live.	Yes.	Roller.	No.	No.	2	No F.	Case
Hol.Crk.	Pist.	Own.	Pump.	11	W.	B&B.	S.P.	16	6½	900	S.P.	Own.	S.G.	2	Wheel.	52–14	S.G.	Spokes	Live.	Yes.	Roller.	No.	No.	2	No F.	Case
Hol.Crk.	Gear.	Own.	Pump.	15½	W.	Own.	E.S.	16½	8½	850	E.S.	Own.	S.G.	2	Wheel.	56–16	S.G.	Spokes	Rev.	Yes.	Roller.	No.	No.	2	Roll.	Case
Hol.Crk.	Gear.	Own.	Pump.	.....	W.	T.Disc.	S.P.	19½	10½	750	S.P.	Own.	S.G.	2	Wheel.	72–20	S.G.	Spokes	Rev.	Yes.	Roller.	No.	No.	2	Roll.	Case
Hol.Crk.	Gear.	Own.	Pump.	6	W.	Own.	M.D.D.	11½	6½	1000	S.G.	Own.	S.G.	3	Spur.	.....	S.G.	.....	Dead.	None	Roller.	Yes.	Yes.	0	No F.	‡Caterpillar.....2 Ton
Hol.Crk.	Gear.	Own.	Pump.	7½	W.	Own.	M.D.D.	12	8½	1000	J.C.	Own.	S.G.	3	Spur.	.....	S.G.	.....	Dead.	None	Roller.	Yes.	Yes.	0	No F.	‡Caterpillar.....5 Ton
Hol.Crk.	Gear.	Own.	Pump.	13½	W.	Own.	M.D.D.	14	10½	850	J.C.	Own.	S.G.	3	Spur.	.....	S.G.	.....	Dead.	None	Roller.	Yes.	Yes.	0	No F.	‡Caterpillar....10 Ton
Cir.Spl.	Gear.	McC.	Pump.	3½	W.	B&B.	S.P.	7	5	1600	None.	Own.	S.G.	1	Track.	42–5½	S.G.	Axle.	.....	No.	Ball.	Yes.	No.	0	No F.	Cletrac F
Hol.Crk.	Gear.	McC.	Pump.	.....	W.	B&B.	S.P.	8	6	1265	None.	Own.	S.G.	1	Track.	48–8	S.G.	Axle.	.....	No.	Roller.	Yes.	No.	0	Roll.	Cletrac W
M.F.M.O.	Ecc.	Perf.	Pump.	12	W.	Own.	E.S.	20	8½	450	E.S.	Own.	S.G.	2	Wheel.	48–12	S.G.	Rim.	Rev.	No.	.....	No.	No.	2	Roll.	Eagle F
M.F.M.O.	Ecc.	Perf.	Pump.	15	W.	Own.	E.S.	24	10	450	E.S.	Own.	S.G.	2	Wheel.	52–12	S.G.	Rim.	Rev.	No.	.....	No.	No.	2	Roll.	Eagle H
Cir.Spl.	Pist.	Mod.	Pump.	7½	W.	Own.	Cone.	12	6⅜	900	Cone.	Own.	S.G.	.....	Wheel.	54–12	I.G.	Spokes	Rev.	No.	Plain.	No.	No.	2	Roll.	E-B AA
Cir.Spl.	Pist.	Perf.	Pump.	9	W.	Own.	Cone.	12	8	700	Cone.	Own.	S.G.	3	Wheel.	60–12	I.G.	Spokes	Dead.	No.	Plain.	No.	No.	2	Roll.	E-B Q
Cir.Spl.	Pist.	Mod.	Pump.	10	W.	Own.	Cone.	16½	9	600	Cone.	Own.	S.G.	2	Wheel.	72–16	I.G.	Spokes	Dead.	Yes.	Plain.	No.	No.	2	Roll.	E-B
Cir.Spl.	Pist.	Mod.	Pump.	.....	W.	Own.	E.S.	.....	.....	.....	.....	Own.	J.C.	1	Wheel.	48–8½	S.G.	Axle.	Live.	Yes.	Roller.	Yes.	Yes.	2	Roll.	Sageol
Cir.Spl.	Own.	Own.	Th-S.	12	W.	Own.	M.D.D.	9½	6½	1000	.....	Own.	J.C.	3	Wheel.	42–12	Worm.	Axle.	Live.	No.	Roller.	No.	No.	2	No F.	Gordson
Cir.Spl.	Pist.	Perf.	Pump.	7¾	W.	Own.	E.S.	13	7	900	.....	Nutt.	S.G.	2	Wheel.	60–10	S.G.	Rim.	Rev.	No.	Plain.	No.	No.	2	Roll.	Frick
Hol.Crk.	Gear.	Perf.	Pump.	9¾	W.	Own.	E.S.	13	7	900	.....	Nutt.	S.G.	2	Wheel.	60–12	S.G.	Rim.	Rev.	No.	Plain.	No.	No.	2	Roll.	Frick
Cir.Spl.	Gear.	S & J.	Pump.	10	W.	Own.	Cone.	11⅜	8⅛	1000	Cone.	Own.	S.G.	2	Drum	54–54	Chain.	Rim.	Rev.	No.	Plain.	No.	No.	2	Roll.	Gray
M.F.M.O.	Pist.	Mod.	Pump.	7¾	W.	Own.	C.B.	13	6½	800	C.B.	Own.	S.G.	2	Wheel.	46–10	I.G.	Rim.	Rev.	No.	Plain.	No.	No.	2	Roll.	Hart-Parr. 20
M.F.M.O.	Pist.	Mod.	Pump.	11	W.	Own.	C.B.	14	8¼	750	C.B.	Own.	S.G.	2	Wheel.	52–10	I.G.	Rim.	Rev.	No.	Plain.	No.	No.	2	Roll.	Hart-Parr. 30
M.F.M.O.	Pist.	Mod.	Pump.	11	W.	Own.	C.B.	14	8¼	750	C.B.	Own.	S.G.	2	Wheel.	52–18	I.G.	Rim.	Rev.	No.	Plain.	No.	No.	2	Roll.	‡Hart-Parr. (Road)
M.F.M.O.	Pist.	Mod.	Pump.	15	W.	Own.	C.B.	14	8½	750	C.B.	Own.	S.G.	2	Wheel.	32–18	I.G.	Rim.	Rev.	No.	Plain.	No.	No.	2	Roll.	Hart-Parr. 40
Cir.Spl.	Gear.	Perf.	Pump.	7	W.	Own.	F.D.	12	6	750	F.D.	Own.	Fric.	7	Wheel.	54– 8	S.G.	Rim.	Rev.	No.	Plain.	No.	No.	2	Press.	Heider D
Cir.Spl.	Gear.	Perf.	Pump.	10	W.	Own.	F.D.	14	7	725	F.D.	Own.	Fric.	7	Wheel.	57–10	S.G.	Rim.	Rev.	No.	Plain.	No.	No.	2	Press.	Heider C
Cir.Spl.	Pist.	Perf.	Th-S.	10	W.	Own.	F.D.	8	5	750	F.D.	Own.	Fric.	7	Wheel.	46– 6	Chain.	Rim.	Dead.	No.	Roller.	Yes.	No.	2	Press.	Heider M-2
Cir.Spl.	Gear.	Perf.	Pump.	8	W.	Own.	E.S.	13	7	1000	E.S.	Own.	S.G.	2	Wheel.	60–10	S.G.	Rim.	Rev.	No.	Plain.	No.	No.	2	Roll.	Huber....(Light Four)
Hol.Crk.	Gear.	Perf.	Pump.	11½	W.	Own.	M.D.D.	13	7	1100	M.D.D.	Own.	S.G.	2	Wheel.	60–10	S.G.	Rim.	Rev.	No.	Plain.	No.	No.	2	Roll.	Huber.....(Super 4)
M.F.M.O.	Pist.	Mod.	Pump.	8	W.	Own.	.....	.....	.....	.....	.....	Own.	Fric.	1	Wheel.	48– 7	I.G.	Rim.	Dead.	Yes.	Plain.	No.	No.	2	Roll.	LaCrosse M
M.F.M.O.	Pist.	Mod.	Pump.	10	W.	Own.	C.B.	.....	.....	.....	C.B.	Own.	S.G.	1	Wheel.	56–10	I.G.	Rim.	Rev.	Yes.	Roller.	Yes.	No.	2	No F.	LaCrosse H
Hol.Crk.	Gear.	Perf.	Pump.	8	W.	T.Disc.	S.P.	15	.....	680	S.P.	Own.	S.G.	2	Wheel.	48–12	S.G.	Spokes	Rev.	No.	Roller.	Yes.	No.	2	Roll.	Lauson S
Hol.Crk.	Gear.	Perf.	Pump.	12	W.	Own.	E.S.	16¾	.....	500	E.S.	Own.	S.G.	2	Wheel.	51–12	S.G.	Rim.	Rev.	No.	Roller.	Yes.	No.	2	Roll.	Lauson T
Cir.Spl.	Ecc.	Perf.	Pump.	10	W.	Own.	E.S.	14	7	800	Fric.	Own.	S.G.	2	Wheel.	50–12	I.G.	Spokes	Dead.	No.	Plain.	No.	No.	2	Roll.	Leader B
Hol.Crk.	Gear.	Own.	Pump.	15	W.	B&B.	S.P.	14	7¼	800	None.	Own.	S.G.	2	Wheel.	52–12	I.G.	Rim.	Rev.	No.	Roller.	No.	No.	2	Roll.	Leader N
Hol.Crk.	Gear.	Mod.	Pump.	10	W.	B&B.	S.P.	12	7	693	J.C.	Own.	S.G.	3	Track.	–14	S.G.	.....	Dead.	No.	Roller.	No.	No.	2	Roll.	Lincoln A
Cir.Spl.	Gear.	S-J.	Pump.	8	W.	Own.	Cone.	10	7	900	E.S.	Own.	S.G.	3	Wheel.	54–14	S.&I.G.	Rim.	Dead.	No.	Roller.	No.	No.	2	Roll.	Little Giant B
Cir.Spl.	Gear.	S-J.	Pump.	12	W.	Own.	Cone.	9	13½	750	E.S.	Own.	S.G.	3	Wheel.	66–20	S.&I.G.	Rim.	Dead.	No.	Roller.	No.	No.	2	Roll.	Little Giant A
Hol.Crk.	Gear.	Special	Pump.	.....	W.	Own.	M.D.D.	.....	.....	.....	.....	Spec.	J.C.	3	Track.	–12	Worm.	Axle.	.....	No.	Roller.	No.	No.	2	Roll.	Lombard
Hol.Crk.	Gear.	S-J.	Pump.	6	W.	Detl.	M.D.D	14	8	1000	.....	Foote.	S.G.	2	Wheel.	48–12	I G	.....	.....	.....	.....	.....	.....	2	Roll.	London
Cir.Spl.	Gear.	Own.	Th-S.	9	W.	Own.	M.D D.	15¼	7	645	M.D.D.	Own.	S.G.	3	Wheel.	42–12	S.G.	Axle.	Live.	No.	Roller.	No.	No.	2	.....	McCormick-Deering
Cir.Spl.	Gear.	Own.	Th-S.	11	W.	Own.	M.D.D.	16¾	8	595	M.D.D.	Own.	S.G.	3	Wheel.	50–12	S.G.	Axle.	Live.	No.	Roller.	No.	No.	2	.....	McCormick-Deering
M.F.M.O.	.....	Mod.	Pump.	8¾	W.	Own.	E.S.	15	6½	750	E.S.	Own.	S.G.	2	Wheel.	56–12	Spur.	Axle.	Live.	No.	Plain.	No.	No.	2	Roll.	Minneapolis
M.F.M.O.	.....	Mod.	Pump.	8½	W.	Own.	M.D.D.	15½	7½	775	M.D.D.	Own.	S.G.	2	Wheel.	54–12	Spur.	Axle.	Live.	No.	Plain.	No.	No.	2	Roll.	Minneapolis
M.F.M.O.	.....	Mod.	Pump.	14	W.	Own.	M.D.D.	18½	10	700	E.S.	Own.	S.G.	2	Wheel.	62–20	Spur.	Axle.	Live.	No.	Plain.	No.	No.	2	Roll.	Minneapolis
M.F.M.O.	.....	Mod.	Pump.	60	W.	.....	C.B.	24	10½	550	E.S.	Own.	S.G.	2	Wheel.	85–30	Spur.	Axle.	Live.	No.	Plain.	No.	No.	2	Roll.	Minneapolis
Hol.Crk.	Gear.	Mod.	Th-S.	6	W.	B&B.	S.P.	9	6½	1200	S.P.	Own.	S.G.	1	Wheel.	52– 8	I.G.	Spokes	Dead.	Yes.	Roller.	Yes.	No.	0	No F.	Moline (Universal D3)
Hol.Crk.	Gear.	Mod.	Th-S.	5	W.	B&B.	S.P.	9	6½	1200	S.P.	Own.	S.G.	1	Wheel.	44– 8	I.G.	Spokes	Dead.	Yes.	Roller.	Yes.	No.	0	No F.	Moline. (Orchard D)
Hol.Crk.	Gear.	Perf.	Pump.	12	W.	T.Disc.	S.P.	16	8½	650	S.P.	Own	S.G.	3	Track.	66–12	Chain.	.....	.....	.....	Plain.	Yes.	No.	.....	Roll.	‡Monarch C
Hol.Crk.	Gear.	Mod.	Pump.	13	W.	T.Disc.	S.P.	.....	.....	.....	.....	Own.	S.G.	3	Track.	67–12	Chain.	.....	.....	.....	Plain.	Yes.	No.	.....	Roll.	‡Monarch E
Hol.Crk.	Gear.	Mod.	Pump.	13	W.	T.Disc.	S.P.	.....	.....	.....	.....	Own.	S.G.	3	Track.	89–12	Chain.	.....	.....	.....	Plain.	Yes.	No.	.....	Roll.	‡Monarch D

Pom—Pomona
King—Kingston
Cir. Spl.—Circulating Splash
Hol. Crk.—Hollow Crank Shaft with Pressure and all Crankshaft Bearings
M. F. M. O.—Multi-Feed Mechanical Oiler
Pist—Piston
Ecc—Eccentric
McC—McCord

Perf—Perfex
Mod—Modine
McC—McCord
S-J—Shotwell-Johnson
Brem—Bremmer
Th-S—Thermo Siphon
W—Water
O—Oil

CLUTCHES:
B. & B.—Borg & Beck
Detl—Detlaff
T.-Disc—Twin-Disc
M. & E.—Merchant & Evans
S. P.—Single Plate
E. S.—Expanding Shoe
M. D. D.—Multiple Dry Disk
C. B.—Contracting Band
F. D.—Friction Drum
Fric—Friction
J. C.—Jaw Clutch
Spec—Special

TRANSMISSION:
Nutt—Nuttall
Full—Fuller
S. G.—Sliding Gear
J. C.—Jaw Clutch

TYPE:
FINAL DRIVE:
S. & I. G.—Spur and Internal Gear
Fric—Friction
I. G.—Internal Gear
S. G.—Spur Gear
SG.-BG.—Spur Gear and Bevel Gear
S. & W. G.—Spur and Worm Gear
Rev—Revolving
B.& R.—Ball and Roller
No F.—No Frame

American Agricultural

MAKE AND MODEL	GENERAL										ENGINE															
																		Governor		Ignition		Fuel System				
	Price	Capacity; No. of 14" Plows	Plowing Speed (M.P.H.)	Wgt. Complete (Lbs.)	Wheel Base (Ins.)	Minimum Turning Diameter (Ft.)	Ground Clearance (Ins.)	Drawbar Type	Drawbar—Belt Rating	Steering Type	Make	Rated Horsepower (N.A.C.C.)	Number Cylinders	Bore and Stroke	Engine Type	No. of Cyls. per Casting	Valve Arrangement	Normal R.P.M. at Plowing Speed	Make	Type	Make of System	Impulse Starter Fitted?	Make and Size of Carbureter (Ins.)	Fuel Feed	Number and Capacity of Fuel Tanks (gals.)	Water Injected?	Make of Air Cleaner
Nichols-Shepard	2600	4–6	2.50	13500	102	.....	....	Hor....	20–42	F.A.K..	Own..	51.20	2	8 x10	Hor..	1	IH....	450	Pick..	Cent.	Dixie..	Yes.	King 2...	Gra..	2-6G-23K...	Yes.	None
Nichols-Shepard	3320	6–8	2.50	20500	111	.....	....	Hor....	25–50	F.A.K..	Own..	39.20	2	9 x12	Hor..	1	IH....	375	Pick..	Cent.	Dixie..	Yes.	King 2½...	Gra..	2-6½G-40K..	Yes.	None
Nichols-Shepard	4030	8–12	1.80	30000	135	.....	....	Hor....	35–70	F.A.K..	Own..	.....	2	10 x14	Hor..	1	IH....	300	Pick..	Cent.	Dixie..	Yes.	King 3...	Gra..	2-8½G-40K..	Yes.	None
Pioneer.....G	....	4	2.50	6500	89	24′ 0″	14	Hor....	18–36	F.A.K..	Own..	48.40	4	5½x6	Hor..	2	"L"H.	750	Pierce.	Cent.	K-W..	Yes.	King 2...	Gra..	1-25G.....	Yes	Ben.
Pioneer.....C	....	10	2.25	24000	156	40′ 0″	24	Non.A..	40–75	F.A.K..	Own..	78.40	4	7 x8	Hor..	2	"L"H.	625	Own..	Cent.	K-W..	Yes.	King 2½...	Gra..	2-70G-30K...	Opt.	Ben.
Russell	....	3– 4	2.40	6000	96¼	29′ 6″	13	Hor....	15–30	F.A.K..	Climax	40.00	4	5 x6½	Ver..	2	"L"H.	950	Climax	Cent.	Split..	Yes.	King 1½...	Gra..	2-3½G-21½K	Yes.	Ben.
Russell	....	4– 5	2.40	7900	109	33′ 6″	13½	Hor....	20–40	F.A.K..	Climax	48.40	4	5½x7	Ver..	2	"L"H.	900	Climax	Cent.	Split..	Yes.	King 1½...	Gra..	2-5G-30K...	Yes.	Ben.
Russell	....	8–10	2.00	22550	149	38′ 0″	15	Hor....	30–60	S.A....	Own..	102.40	4	8 x10	Ver..	1	"L"H.	525	Pick..	Cent.	Split..	Yes.	King 2...	Gra..	2-22G-88K...	Yes.	Ben.
‡Shaw-Enochs (Grader)	.....	.....	.....	4400	153½	.....	....	Uni....	.....	S.A....	LeRoi.	15.63	4	3½x4½	Ver..	4	"L"H.	1200	LeRoi.	Cent.	Eise...	No..	Scheb 1..	Gra..	1-20G.....	No..	Unite
Stinson	1635	3– 4	3.00	7100	114	12′ 0″	....	Ver....	18–36	F.A.K..	Beav..	36.10	4	4¾x6	Ver..	4	IH....	1000	Taco..	Cent.	Dixie..	Yes.	King 1⅜..	Gra..	2-6G-26K...	No..	Rain
Titan	.....	3	2.75	5710	91	14′ 0″	....	Uni....	10–20	F.A.K..	Own..	37.80	2	6½x8	Hor..	2	IH....	575	Own..	Cent.	Eise...	Yes.	Ensign...	Pres..	1-16K.....	Yes.	Own.
‡Topp-Stewart	3500	6	2.50	7800	100	12′ 0″	12	Hor....	30–45	S.A....	Wauk.	36.10	4	4¾x6¾	Ver..	2	"L"H.	950	Wauk.	Cent.	Eise...	Yes.	Strom 1½	Gra..	1-25G.....	No..	Ben.
Toro	675	2	2.75	2900	72	11′ 0″	10½	Uni....	6–10	F.A.K.	LeRoi.	15.63	4	3½x4½	Ver..	4	"L"H.	1200	Own..	Cent.	Eise...	No..	King 1...	Gra..	1-15G.....	No..	Own.
Townsend	800	2– 3	2.50	4500	78	20′ 0″	16	Hor....	10–20	F.A.K.	Own..	33.80	2	6½x7	Hor..	2	IH....	550	Own..	Cent.	Split..	Yes.	Own 1½..	Pres..	1-14K.....	Yes.	Opt.
Townsend	1350	3– 4	2.50	6500	86	24′ 0″	17	Hor....	15–30	F.A.K.	Own..	39.20	2	7 x8	Hor..	2	IH....	500	Own..	Cent.	Split..	Yes.	Own 2....	Pres..	1-18K.....	Yes.	Opt.
Townsend	2250	4– 8	2.50	11500	102	30′ 0″	18	Hor....	25–50	F.A.K.	Own..	57.80	2	8½x10	Hor..	2	IH....	475	Own..	Cent.	Split..	Yes.	Own 2½..	Pres..	1-30K.....	Yes.	Opt.
Traylor	500	1	2.25	1750	76	20′ 0″	16	Hor....	6–12	F.A.K.	LeRoi.	15.63	4	3½x4½	Ver..	4	"L"H.	1000	LeRoi.	Cent.	Split..	Yes.	King 1...	Gra..	1-10G.....	No	Own.
Twin City	1200	3	2.90	4700	84	12′ 6″	10	Hor....	12–20	F.A.K.	Own..	28.90	4	4¼x6	Ver..	4	IH....	1000	Own..	Cent.	Bosch.	Yes.	Holley1¼	Gra..	2-1½G-23K..	No..	Don.
Twin City	2750	5	2.90	8400	97	15′ 0″	13	Hor....	20–35	F.A.K.	Own..	48.40	4	5½x6¾	Ver..	4	IH....	900	Own..	Cent.	Bosch.	Yes.	Holley 2..	Gra..	2-1½G-40K..	No..	Ben.
Twin City	4750	8	2.00	23700	144	42′ 0″	16	Hor....	40–65	F.A.K.	Own	96.10	4	7¾x9	Ver..	1	IH....	535	Own..	Cent.	Bosch.	Yes.	Strom 2..	Gra..	2-10G-95K...	Yes.	Nau.
Uncle Sam.....C-20	....	2– 3	3.50	3000	72	12′ 0″	10	Hor....	12–20	F.A.K..	Hor..	25.60	4	4 x5	Ver..	4	IH....	1200	Duplex	Suct.	Dixie..	Yes.	King 1¼..	Gra..	1-20G.....	No..	Ben.
Uncle Sam.....B-19	....	3– 4	3.75	4650	85	13′ 0″	14	Hor....	20–30	F.A.K..	Beav..	36.10	4	4¾x6	Ver..	4	IH....	1000	Duplex	Cent.	Dixie..	Yes.	Ben. 1½..	Gra..	2-5G-22K...	No..	Ben.
Uncle Sam.....D-21	....	3– 4	3.75	4600	85	13′ 0″	14	Hor....	20–30	F.A.K..	Beav..	36.10	4	4¾x6	Ver..	4	IH....	1000	Duplex	Cent.	Dixie .	Yes.	Ben. 1½..	Gra..	2-5G-22K...	No..	Ben.
Wallis.....OK	....	3	3.50	3660	84	20′ 0″	13	Uni....	15–27	F.A.K.	Own..	28.90	4	4¼x5¾	Ver..	4	IH....	900	Own..	Hyd.	Bosch.	Yes.	Ben. 1¼..	Gra..	1-20G&K....	No..	Own.
Waterloo Boy.....N	....	3	3.00	5869	89	14′ 0″	13	Hor....	12–25	F.A.K.	Own..	33.80	2	6½x7	Hor.	2	IH....	750	Own	Cent.	Split..	Yes.	Scheb 1½	Gra..	2-1G-20K....	Yes.	Own.
Wetmore	1185	3	3.50	2900	72	15′ 0″	12½	Hor....	12–25	F.A.K.	Wauk.	25.60	4	4 x5¾	Ver..	2	"L"H.	1050	Wauk.	Cent.	Split..	Yes.	Scheb 1¼	Gra..	2-2½G-12K..	No..	Nor.
Wisconsin	1750	3– 4	3.50	5600	90	11′ 0″	16	Hor....	16–30	F.A.K.	Climax	40.00	4	5 x6½	Ver..	2	"L"H.	800	Climax	Cent.	Eise...	Yes.	Strom 1½	Gra..	2-6G-20K....	No..	R-W.
Wisconsin	2550	4– 5	3.50	7500	.....	12′ 0″	15	Hor....	22–40	F.A.K.	Climax	48.40	4	5½x7	Ver..	2	"L"H.	800	Climax	Cent.	Eise...	Yes.	Strom 1½	Gra..	2-6G-25K....	No	R-W.
Yuba.....(Rail Tread)	2750	4	2.25	5750	.....	15′ 0″	10	Hor....	15–25	S.A....	Wis...	28.90	4	4¼x6	Ver	4	"L"H.	900	Own..	Cent.	Bosch.	Yes	Strom 1¼	Gra..	2-4G-21K....	No..	Pon.
Yuba.....(Ball Tread)	4500	8	2.08	10130	.....	16′ 6″	11⅝	Uni....	25–40	S.A....	Own..	52.90	4	5¾x7	Ver..	2	IH....	800	Own..	Cent.	Bosch.	Yes.	Strom 1¼	Gra..	2-8G-38K....	.....	Pon.

ABBREVIATIONS:

‡—Industrial Tractor

Drawbar Type:
Hor—Horizontal
Ver—Vertical
Uni—Universal
Non-A—Non-Adjustable

Steering Gear Type:
F. A. K.—Front Axle Knuckle
S. A.—Swinging Axle
T. D. M.—thru Driving Members

ENGINE:
Midw—Midwest
Lyco—Lycoming
Beav—Beaver
Wauk—Waukesha
Weid—Weidley
Wis—Wisconsin
Ver—Vertical
Hor—Horizontal
Opp—Opposed
"L" H—"L" Head
"T" H—"T" Head
I .H.—In Head
Pick—Pickering
Cent—Centrifugal
Elec—Electric
Suct—Suction
Hyd—Hydraulic
Eise—Eisemann
Split—Splitdorf
A-K—Atwater-Kent
King—Kingston
Ben—Bennett
Strom—Stromberg
Tillot—Tillotson
Scheb—Schebler
Colum—Columbia
Gra—Gravity
Pres—Pressure
Vac—Vacuum
G—Gasoline
K—Kerosene
Stayn—Staynew
Rains—Rainstrom
Don—Donaldson
Ben—Bennett

American Garden

MAKE AND MODEL	GENERAL										ENGINE												
																	Governor		Ignition	Fuel			
	Price	Operator's Position	Type of Steering	Size Plow Recommended (Ins.)	Number Plows Recommended	Plowing or Cultivating Speed (M.P.H.)	Weight (Lbs.)	Ground Clearance (Ins.)	Drawbar Type	Drawbar—Belt Rating	Make	H. P. Rating (N.A.C.C.)	Normal R.P.M. at Plowing Speed	Number Cylinders	Bore and Stroke	Engine Type	Valve Arrangement	Make	Type	Make	Make and Size Carbureter (Ins.)	Fuel Recommended	Make of Air Cleaner
Are.....F	$385	Rid....	Wheel..	12″	1	2-3	1000	10	Non-A..	3–6...	Own....	8.10	900	1	4½x5	Ver...	"L"H...	Own .	Cent..	Bosch...	Scheb-L..	Gas...	
Beeman.....(Junior)	195	Wal....	H-Bars..	None...	0	.....	190	14	Uni.....	½–1	B&S....	2.50	.....	1	2½x2½	Ver...	"L"H...	None..	None..	Own....	B&S-½..	Gas...	
Beeman.....K	265	Wal....	H-Bars..	7″	....	¾–3	550	7¾	Uni.....	1½–4	Own....	4.90	800	1	3½x4½	Ver...	"L"H...	None..	None..	Heinze..	King-¾..	Gas...	
Bolens	180	Wal....	H-Bars..	None...	0	.....	200	14	Hor.....	.....	B&S....	1.40	1200	1	2½x2½	Ver...	"L"H...	None..	None..	Own....	B&S-¾..	Gas...	
Centaur.....1924	345	R or W..	H-Bars..	9″–10″	1	1 -3	800	13	Uni.....	2½–5	New Way	8.10	900	1	4½x4½	Ver...	IH.....	N-W..	Cent..	Bosch...	Cart-1...	G-B...	
Do-It-All.....(Jack)	395	R or W..	H-Bars..	9″	1	.....	750	15	Uni.....	2- 6	Own....	5.25	1500	1	3⅝x3⅞	Ver...	IH.....	Own..	Cent..	.....	.....	Gas...	
Do-It-All.....(Baby)	495	R or W..	H-Bars..	10″	1	.....	1200	9	Uni.....	3- 6	Own....	8.10	700	1	4½x5	Ver...	"L"H...	None..	None..	Own....	Own-¼..	K....	
Do-It-All...(Twin Twelve)	495	R or W..	H-Bars..	10″–12″	1	.....	800	11	Uni.....	4–15	Own....	9.11	1500	2	3⅝x3⅞	Ver...	IH.....	None..	None..	Own....	.....	G-B...	
Kinkade	190	Wal....	H-Bars..	5″	1	1½–2½	180	9	Uni.....	1½–3	Own....	3.80	1000	1	3 x3	Ver...	IH.....	None..	None..	Berling..	Scheb-½..	Gas...	
M. B. M.....Red E	250	Wal....	H-Bars..	6″	1	1 -4	410	7	.....	1–4½	Own....	5.50	1000	1	3¼x4	Ver...	IH.....	None..	None..	Bosch..	Holley-¾..	Gas...	
Motor Macultivator	148	Wal....	H-Bars..	.....	0	.....	210	9	.....	1½–	Own....	.....	1000	1	2¾x3½	Ver...	"L"H...	None..	None..	Berling..	Scheb-¼..	Gas...	
N B.....2	375	R or W..	H-Bars..	9″	1	1½–3	750	10	Non-A..	–6	Own....	6.50	1500	2	2¾x4	Ver...	"L"H...	None..	None..	Simms..	King-¾..	Gas...	
Utiliter.....501	295	Wal....	H-Bars..	10″	1	2½	750	8	Uni.....	2¼–4	Own....	4.90	800	1	3½x4½	Ver...	"L"H...	Funk..	Cent..	Eise....	Holley-¾..	Gas...	
Utiliter.....501-A	340	Rid.....	H-Bars..	10″	1	2½	925	8	Uni.....	2¼x4	Own....	4.90	800	1	3½x4½	Ver ..	"L"H...	Funk..	Cent..	Eise....	Holley-¾..	Gas...	

ABBREVIATIONS:

GENERAL:
Rid—Riding
Wal—Walking
R. or W.—Riding or Walking
H. Bars—Handle Bars

Non-A—Non-Adjustable
Hor—Horizontal
Uni—Universal
B. & S.—Briggs and Stratton
Ver—Vertical
"L" H—"L" Head
I. H.—In Head
Cent—Centrifugal
N-W.—New-Way
Eise—Eisemann
Scheb—Schebler
King—Kingston
Cart—Carter

Tractor Specifications—Continued

ENGINE						CLUTCH		BELT PULLEY				TRANSMISSION														MAKE AND MODEL
Oiling System		Cooling System																								
Type of System	Type of Pump	Make of Radiator	Circulation by	Capacity of System (Gals.)	Fluid	Make	Type	Diameter (Ins.)	Face (Ins.)	Normal R.P.M.	Clutch Type	Make	Type	Number of Forward Speeds	Final Drive	Diameter and Face Traction Members (Ins.)	Drive from Gearset to Traction Members	Drive Taken Through	Drive Wheel Axle Type	Does Differential Lock?	Type Drive Shaft Axle Bearings	Individual Brakes for Steering?	Individual Clutches for Steering?	Number of Non-Drive Wheels	Frame Type	
M.F.M.O.	Ecc...	Perf...	Pump..	23	W..	Own...	C.B...	22	8	450	E.S....	Own..	J.C..	2	Wheel.	64–20	I.G....	Rim..	Live..	No...	Plain..	No..	No..	2	Roll...	Nichols-Shepard
M.F.M.O.	Ecc...	Perf...	Pump..	40	W..	Own...	C.B...	24	9	375	E.S....	Own..	J.C...	1	Wheel.	69–28	S.G....	Rim..	Live..	No...	Plain..	No..	No..	2	Roll...	Nichols-Shepard
M.F.M.O.	Ecc...	Perf...	Pump..	40	W..	Own...	E.S....	30	12	300	E.S....	Own..	J.C..	1	Wheel.	73–32	S.G....	Rim..	Live..	No...	Plain..	No..	No..	2	Roll...	Nichols-Shepard
M.F.M.O.	Gear..	S-J...	Pump..	20	W..	Own...	M.D.D.	14	7	725	M.D.D.	Own..	S.G..	3	Wheel.	60–18	S.G....	Spokes	Rev...	No...	Roller	No..	No..	2	Roll...	Pioneer.....G
M.F.M.O.	Gear..	S-J...	Pump..	35	W..	Own...	M.D.D.	17½	15	625	M.D.D.	Own..	S.G..	3	Wheel.	96–24	S.G....	Spokes	Rev...	No...	Plain..	Yes.	No..	2	Roll...	Pioneer.....C
Sol.Crk..	Vane..	Mod..	Pump..	8	W..	Own...	E.S....	12½	7	833	None...	Own..	S.G..	2	Wheel.	56–14	S.G....	Rim..	Dead..	No...	Roller.	No..	No..	2	Roll...	Russell
Sol.Crk..	Vane..	Mod..	Pump..	9½	W..	Own...	E.S....	12½	8	835	None...	Own..	S.G..	2	Wheel.	60–16	S.G....	Rim..	Dead..	No...	Roller.	No..	No..	2	Roll...	Russell
M.F.M.O.	Gear..	Mod..	Pump..	26	W..	Own...	E.S....	24	10	525	E.S....	Own..	S.G..	2	Wheel.	84–22	S.G....	Rim..	Dead..	No..	Plain.	No..	No..	2	Roll...	Russell
Air Spl...	Ecc...	S-J...	Th-S...	7	W..	B&B...	S.P....	.....	.....	.....	None...	Own..	S.G..	2	Wheel.	48– 8	Worm..	Axle..	Live..	No...	B&R..	No..	No..	0	No. F.	‡Shaw-Enochs (Grader)
Sol.Crk..	Gear..	Todd..	Pump..	10	W..	Own...	C.B....	12	8	1000	C.B....	Own..	S.G.	1	Wheel.	60–12	S.G....	Axle..	Live..	No...	Plain..	No..	No..	2	No. F.	Stinson
M.F.M.O.	Pist..	Own..	.....	40	W..	Own...	F.D....	18	8½	575	F.D....	Own..	S.G..	2	Wheel.	54–10	Chain..	Spokes	Dead..	Yes..	Roller.	No..	No..	2	Roll...	Titan
Air Spl...	Gear..	Brem..	Pump..	12	W..	Hill....	M.D.D.	Opt.	.....	.....	Opt....	Own..	S.G..	3	Wheel.	42–12	S.&I.G.	Rim..	Live..	No...	Roller.	No..	No..	0	Roll...	‡Topp-Stewart
Air Spl...	Pist..	S-J...	Th-S...	3	W..	Own...	C.B....	8	5	1200	None...	Own..	S.G..	2	Wheel.	41– 9	S.G....	Spokes	Dead..	Yes..	Roller.	Yes.	No..	2	No. F.	Toro
M.F.M.O.	Pist..	Own..	Pump..	50	W..	Own...	Spec...	18	7	550	Spec...	Own..	S.G..	1	Wheel.	48–12	S.G....	Rim..	Live..	No...	Plain..	No..	No..	2	Roll...	Townsend
M.F.M.O.	Pist..	Own..	Pump..	75	W..	Own...	Spec...	20	8	500	Spec...	Own..	S.G..	1	Wheel.	56–18	S.G....	Rim..	Live..	No...	Plain..	No..	No..	2	Roll...	Townsend
M.F.M.O.	Pist..	Own..	Pump..	100	W..	Own...	Spec...	22	10	475	Spec...	Own..	S.G..	1	Wheel.	60–24	S.G....	Axle..	Live..	No...	Plain..	No..	No..	2	Roll...	Townsend
Sol.Crk..	Pist..	G&O..	Th-S...	4	W..	B&B...	S.P....	8	6	1000	None...	Own..	S.G..	1	Wheel.	38–10	I.G....	Rim..	Dead..	No...	Plain..	Yes.	No..	2	Roll...	Traylor
Sol.Crk..	Gear..	Mod..	Pump..	10½	W..	T.Disc.	S.P....	16	6½	650	None...	Own..	S.G..	2	Wheel	50–12	S.G....	Axle.	Live..	No...	Roller.	No..	No..	2	No. F.	Twin City
Sol.Crk..	Gear..	Mod..	Pump..	18	W..	T.Disc.	S.P....	21	8½	466	None...	Own..	S.G..	2	Wheel.	60–20	S.G....	Axle.	Live..	No...	Roller.	No..	No..	2	No. F.	Twin City
M.F.M.O.	Plung.	Own..	Pump..	130	W..	Own...	C.B....	23	10½	535	C.B....	Own..	J.C..	1	Wheel.	84–24	S.G....	Rim..	Rev...	No...	Plain..	No..	No..	2	Roll...	Twin City
Sol.Crk..	Gear..	Perf...	Pump..	.....	W..	B&B...	S.P....	16	6	1000	None...	Own..	Chain	2	Wheel.	46–12	Chain..	Axle..	Live..	No...	Roller.	No..	No..	2	Roll...	Uncle Sam.....C-20
Sol.Crk..	Gear..	Perf...	Pump..	.....	W..	T.Disc.	S.P....	11	9¼	1000	J.C....	Nutt..	S.G..	2	Wheel	50–12	S.G....	Axle.	Live..	No...	Roller.	No..	No..	2	Roll...	Uncle Sam.....B-19
Sol.Crk..	Gear..	Perf...	Pump..	.....	W..	T.Disc.	S.P....	11	9¼	1000	J.C....	Nutt..	S.G..	2	Wheel.	50–12	S.G....	Axle.	Live..	No...	Roller.	No..	No..	2	Press..	Uncle Sam.....D-21
Air Spl...	Pist..	Mod..	Pump..	5¼	W..	T.Disc.	S.P....	18½	7	475	T.Disc.	3.P....	S.G..	2	Wheel.	48–12	S.G....	Axle.	Live..	No...	Roller.	No..	No..	2	Roll...	Wallis.....OK
Air Spl...	Pist..	Mod..	Pump..	13	W..	Own...	C.B....	14	8	750	C.B....	Own..	S.G..	2	Wheel.	52–12	I.G....	Rim..	Rev...	No...	Roller.	No..	No..	2	Press..	Waterloo Boy.....N
Sol.Crk..	Gear..	Ideal..	Pump..	7½	W..	Fuller..	M.D.D.	12	7	750	None...	Full...	S.G..	3	Wheel.	46–10	I.G....	Spokes	Dead..	No...	Roller.	No..	No..	2	Roll...	Wetmore
Sol.Crk..	Ecc...	Perf...	Pump..	14	W..	T.Disc.	Plate...	16	8	575	Plate...	Foote.	S.G..	2	Wheel.	52–12	S.G....	Rim..	Rev...	No...	Plain..	No..	No..	2	Roll...	Wisconsin
Sol.Crk..	Ecc...	Perf...	Pump..	16	W..	T.Disc.	Plate...	16	9	375	Plate...	Foote.	S.G..	2	Wheel.	52–12	S.G....	Rim..	Rev...	No...	Plain..	No..	No..	2	Roll...	Wisconsin
Sol.Crk..	Gear..	Mod..	Pump..	5½	W..	Parag..	M.D.O.	12	6½	900	S.P....	Own..	S.G..	2	Track.	-12	S.G....	.....	.....	.....	Roller.	No..	Yes.	1	Roll...	Yuba.....(Ball Tread)
Air Spl...	Gear..	Mod..	Pump..	20	W..	Parag..	M.D.O.	14	8½	800	S.P....	Own..	S.G..	2	Track.	-17½	S.G....	.....	.....	.....	Roller.	No..	Yes.	1	Roll...	Yuba.....(Ball Tread)

om—Pomona
King—Kingston
Air. Spl.—Circulating Splash
Sol. Crk.—Hollow Crank Shaft with Pressure and all Crankshaft Bearings
M. F. M. O.—Multi-Feed Mechanical Oiler
Pist—Piston
Ecc—Eccentric
McC—McCord

Perf—Perfex
Mod—Modine
McC—McCord
S-J—Shotwell-Johnson
Brem—Bremmer
Th-S—Thermo Siphon
W—Water
O—Oil

CLUTCHES:
B. & B.—Borg & Beck
Detl—Detlaff
T.-Disc—Twin-Disc
M. & E.—Merchant & Evans
S. P.—Single Plate
E. S.—Expanding Shoe
M. D. D.—Multiple Dry Disk
C. B.—Contracting Band
F. D.—Friction Drum
Frie—Friction
J. C.—Jaw Clutch
Spec—Special

TRANSMISSION:
Nutt—Nuttall
Full—Fuller
S. G.—Sliding Gear
J. C.—Jaw Clutch

TYPE:
FINAL DRIVE:
S. & I. G.—Spur and Internal Gear
Frie—Friction
I. G.—Internal Gear
S. G.—Spur Gear
SG.-BG.—Spur Gear and Bevel Gear
S. & W. G.—Spur and Worm Gear
Rev—Revolving
B. & R.—Ball and Roller
No F.—No Frame

Tractor Specifications

ENGINE								CLUTCH			BELT PULLEY			TRANSMISSION										MAKE AND MODEL
Fuel System		Oiling System		Cooling System																				
Number and Capacity of Fuel Tanks (gals.)	Make and Size Carbureter (Ins.)	Type of System	Type of Pump	Cooled By	Make of Radiator	Circulation By	Capacity of System	Make	Type	Control	Make of Clutch	R.P.M.	Diameter and Face (ins.)	Type	No. Forward Speeds	Drive from Engine or Gearset to Driving Wheels	Final Drive	No. Driving Wheels	Diameter and Face Driving Wheels (ins.)	Type Drive Wheel Axle Bearings	No. Non-Drive Wheels	Frame Type	
1-½G..	Don..	Cir-Spl.	Gear...	Water.	Sh-John.	Ther-S..	2	Own....	E.B....	H-Lever...	Own..	900	6 -4½	.....	1	Worm.	Axle..	2	30–4	Roller.	0	None...	Aro.....F
1-½G..	Don..	Cir-Spl.	Piston..	Air...	None....	Fan.....	0	Own....	Special	H-Lever...	None..	.....	.....	Direct.	1	Chain.	Spokes	2	16–3	Plain..	0	None...	Beeman.....(Junior)
1-½G..	Don..	Cir-Spl.	None..	Water.	Sh-John	Ther-S..	0	Own....	Cone...	H.B.Grip..	None..	800	3½-4½	Direct.	1	Sp.G..	Rim..	2	25–3¼	Plain..	2	None...	Beeman.....K
1-½G..	Don..	Cir-Spl.	Piston..	Air...	None...	Fan.....	0	Own....	.....	.....	.....	....	6 -2	250	1	Chain.	.....	2	16–3	Dead..	2	Steel...	Bolens
2-½G..	Own..	Splash..	None...	Air...	None...	Fan.....	0	New Way	MDD..	H-Lever...	None..	900	4 -6	S.G...	1	Chain.	Axle..	2	28–4	Roller.	0	Rolled..	Centaur.....1924
1-5G..	None..	Cir-Spl.	.....	Air...	None...	Fan.....	0	Own....	.....	H.B.Grip..	None..	1500	3 -3	J.C....	.....	.....	.....	2	.....	Roller.	0	.....	Do-It-All.....(Jack)
1-1K..	None..	Cir-Spl.	.....	Water.	.....	.....	.....	Own....	Jaw....	H.B.Grip..	None..	1800	2 -2	J.C....	.....	.....	Axle..	2	26–2½	.....	0	.....	Do-It-All.....(Baby)
1-9G..	None..	Cir-Spl.	Gear...	Air...	None...	Fan.....	0	Own....	Jaw....	H.B.Grip..	None..	1500	4 -4	S.G....	.....	.....	Axle..	2	32–4	Roller.	2	None...	Do-It-All...(Twin Twelve)
1-10G	Own..	Cir-Spl.	Ecc....	Air...	None...	Fan.....	0	Own....	Jaw....	H.B.Grip..	None..	1000	3 -3	JC....	1	IG....	Spokes	1	22–5¼	Plain..	2	Pressed.	Kinkade
1-9G..	Own..	Spec...	None..	Air...	None...	Fan	0	.....	.....	H-Lever..	None..	....	3 -3½	JC....	1	Worm.	Axle..	2	20–3	Plain..	2	None..	M. B. M.....Red E
1-9G..	None.	NCS...	Gear...	Air...	None...	Fan	0	Own....	Cone...	H.B.Grip.	None..	.....	.....	SG....	Spokes	2	19½-3	Plain.	0	None..	Motor Macultivator		
1-10	Ben..	Cir-Spl.	.....	Water.	G&O....	Ther-S..	3	Own....	.....	H-Lever...	None..	2800	5½-4¼	Plan..	1	IG....	Rim,.	2	32–4	Plain..	2	None...	N B 2
1-10	Own..	Cir-Spl.	Gear...	Water.	Fedders	Ther-S..	1½	Own....	Cone...	H.B.Grip	None..	1200	4½-3¾	Direct.	1	IG....	.....	2	24¾-4	Plain..	2	.....	Utiliter.....501
1-10	Own..	Cir-Spl	Gear...	Water.	Fedders	Ther-S..	1½	Own....	Cone..	H-Lever.	None..	1200	4½-3¾	Direct.	1	IG....	.....	2	24¾-4	Plain..	2	.....	Utiliter.....501 A

Gas—Gasoline
K—Kerosene
G-K—Gasoline or Kerosene
Don—Donaldson
Ben—Bennett

Cir. Spl.—Circulating Splash
Ecc—Eccentric
Sh.-John—Shotwell-Johnson
Ther-S.—Thermo-Siphon
NCS—Non-Circulating Splash

Spec—Special
E. B.—Expanding Band
M. D. D.—Multiple Dry Disk
H. Lever—Hand Lever
H. B. Grip—Handle Bar Grip

TRANSMISSION:
S. G.—Sliding Gear
J. C.—Jaw Clutch

Plan—Planetary
Sp. G.—Spur Gear
IG—Internal Gear

American Air

MAKE AND MODEL	GENERAL CHARACTERISTICS									ENGINE					PERFORMANCE							
	Class	Type	Designed For	Seating Capacity	Overall Dimensions			Wings of Folding Type?	Wing of Quick Detachable Type?	Make and Model	Number	Total Horse Power	Cooling and Type	Method of Starting	Full Throttle		Cruising Speed		Landing Speed M. P. H.	Climb	Service or Ceiling Height (Ft.)	Endurance at Cruising Speed (Hrs.)
					Length (Ft. Ins.)	Height (Ft. Ins.)	Width (Ft. Ins.)								M. P. H.	Altitude (Ft.)	M. P. H.	Altitude (Ft.)		Altitude (Ft.)		
Aeromarine.....**85**	Pu Bi	Fly B	Pas & F	6	38-1	14-10	73-11	No.	No.	Liberty.....12	1	330	W-Vee	Hand Crk	80.0	Se L.	70.0	Se L.	48.0	1950	9000	4½
Aeromarine.....**75**	Tr Bi	Fly B	Pas & F	14	49-4	18-9	103-9	No.	No.	Liberty.....12	2	660	W-Vee	Hand Crk	84.0	Se L.	70.0	Se L.	54.0	2550	9000	8
Aeromarine.....**50**	Pu Bi	Fly B	Pas & F	3	28-11½	12-1	48-6	No.	No.	Aeromarine....U8D	1	180	W-Vet	Hand Crk	82.0	Se L.	65 0	Se L.	44.0	3500	9000	4
Aeromarine.....**AM-1**	Tr Bi	Land Mac.	Mail C	1	32-11	12-9	50-0	No.	No.	Liberty.....12	1	420	W-Vee	Pro Swg	116.0	Se L.	95 0	Se L.	44.0	6500	17000	4
Aeromarine.....**AMC**	Pu Bi	Fly B	Pas & F	9	35-10	13-6	65-0	No.	No.	Liberty.....12	1	420	W-Vee	Hand Crk	98.0	Se L.	80.0	Se L.	50.0	3300	14000	7
Bellanca.....**CF5**	Tr Mo	Land Mac.	Pas & F	5	23-0	.....	10-10	No.	No.	Anzani.....	1	90	A-Rad	Pro Swg	109.8	Se L.	95.0	Se L.	30.0	7000		
Barling.....**NBL-1**	T & P Tr	Land Mac.	Nig B	8	120-0	27-0	65-0	No.	No.	Liberty.....12	6	2400	W-Vee	Ele Mot	93.0	Se L.	.....	.....	65.0	7000	10000	12†
Boeing.....**GA2**	Tr Bi	Land Mac.	Gro A	3	36-9⅛	12-0	54-0	No.	No.	U. S. A.....W1A	1	700	W-3"W"	Ele Mot	.....	.....	.....	.....	.....	.....	.....	.....
Boeing.....**Pw9**	Tr Bi	Land Mac.	Fig S	1	23-0	8-9⅛	32-0	No.	No.	Curtiss.....D12	1	375	W-Vee	Hand Mag	165.0	Se L.	.....	.....	60.0	1800	22000	2½†
Boeing.....**V & B-1**	Tr Bi	Seaplane	Ele Tr	2	28-1½	11-7⅞	36-10	No.	No.	Wright.....J1	1	200	A-Rad	Hand Crk	104.0	Se L.	.....	.....	48.0	900	16400	2†
Cox-Klemin.....**TW-2**	Tr Bi	Land Mac.	Adv Tr	2	23-9	9-1½	29-0	No.	Yes.	Wright.....E2	1	190	W-Vee	Hand Mag	125.0	Se L.	.....	.....	47.0	.....	.....	3½
Cox-Klemin.....**XS-1**	Tr Bi	Seaplane	Dek F	1	18-0	8-0	18-0	No.	Yes.	Wright.....L-4	1	60	A-Rad	Hand Crk	100.0	Se L.	.....	.....	50.0	4000	8400	2†
Curtiss.....**1923 Navy**	Tr Bi	Land Mac.	Rac	1	19-8½	6-10	22-0	No.	No.	Curtiss.....D-12A	1	500	W-Vee	Pro Swg	247.5	Se L.	.....	.....	75.0	.....	.....	††
Curtiss.....**Mail**	Tr Bi	Land Mac.	Mail	1	26-11	10-3	33-0	No.	No.	Curtiss.....C-6	1	160	W-Vee	Pro Swg	106.0	Se L.	75.0	Se L.	44.0	5600	12000	3½†
Curtiss.....**NBS-1**	Tr Bi	Land Mac.	Nig B	3	44-2½	14-8½	71-2	Yes.	No.	Liberty.....12	2	840	W-Vee	Ele Mot	97.5	Se L.	75 0	Se L.	59.0	5000	7780	.....
Curtiss.....**PW-8**	Tr Bi	Land Mac.	Fig S	1	22-10	9-2	32-0	No.	No	Curtiss.....D-12	1	460	W-Vee	Hand Mag	170.0	100	110.0	15000	61.5	14000	27300	6
Curtiss.....**R-6**	Tr Bi	Land Mac.	Rac	1	18-10½	7-7	19-0	No.	Yes.	Curtiss.....D-12	1	460	W-Vee	Hand Mag	236.5	100	.....	.....	75.0	.....	.....	.....
Curtiss.....**Seaplane**	Tr Bi	Seaplane	Rac	1	25-0⅛	10-8½	22-8	No.	No.	Curtiss.....D-12	1	460	W-Vee	Hand Crk	194.0	Se L.	.....	.....	74.0	.....	23500	1½†
Curtiss.....**TS**	Tr Bi	Seaplane	Fig S	1	24-10	9-6¼	25-0½	No.	Yes.	Wright.....J-1	1	220	A-Rad	Hand Crk	122.0	Se L.	90 0	Se L.	53.0	10000	13500	2½†
Curtiss.....**TS**	Tr Bi	Land Mac.	Dek F	1	22-1½	8-11⅞	25-0½	No.	Yes.	Wright.....J-1	1	220	A-Rad	Hand Crk	131.0	Se L.	90 0	Se L.	50.0	10000	14400	2½†
Curtiss.....**Standard**	Tr Bi	Land Mac.	Pas & F	3	27-1½	10-5	14-10	No.	No.	Curtiss.....C6	1	160	W-Vet	Ele Mot	80.0	Se L.	70 0	Se L.	43.0	10000	11000	3
Curtiss.....**Oriole**	Tr Bi	Land Mac.	Pas & F	3	26-0	10-3	10-9	No.	No.	Curtiss.....C6	1	160	W-Vet	Ele Mot	96.0	Se L.	60 0	Se L.	15.0	10000	15000	3½
Curtiss.....**Seagull**	Pu Bi	Fly B	Pas & F	3	28-10	11-9	50-3	No.	No.	Curtiss.....C6	1	160	W-Vet	Ele Mot	76.5	Se L.	68.0	Se L.	48.5	6500	7000	3½
Davis-Douglas.....**D.W.C.**	Tr Bi	Land Mac.	Recon	2	35-2½	13-7½	50-0	Yes.	Yes.	Liberty.....12	1	400	W-Vee	Ele Mot	105.4	Se L.	.....	.....	.....	.....	7750	.....
Dayton Wright.....**Chummy**	Tr Bi	Land Mac.	Adv Tr	2	.....	.....	34-9½	No.	No.	Wright.....E	1	180	W-Vee	Hand Mag	114.0	Se L.	.....	.....	.....	4800	.....	3½
Douglas.....**DCT**	Tr Bi	Land Mac.	Pas & F	9	35-6	13-7	20-2	Yes.	Yes.	Liberty.....12	1	440	W-Vee	Hand Crk	118.0	Se L.	95 0	Se L.	50 0	3400	9500	9
Douglas.....**DT2**	Tr Bi	Convert	Torp	2	34-0	13-7	20-2	Yes.	No.	Liberty.....12	1	440	W-Vee	Hand Crk	112.0	Se L.	85.0	Se L.	50.0	3400	9500	5½
Fokker.....**T2**	Tr Mo	Land Mac.	Pas & F	2	49-1	11-10	74-10	No.	Yes.	Liberty.....12	1	400	W-Vee	Pro Swg	95.0	Se L.	.....	.....	.....	.....	.....	27
Gallaudet.....**B-4**	Pu Bi	Seaplane	Recon	3	33-6	11-8	16-5	No.	No.	Liberty.....12	1	400	W-Vee	Hand Mag	135.0	Se L.	.....	.....	55.0	.....	.....	.....
DeHaviland.....**4L**	Tr Bi	Land Mac.	Recon	2	29-11	9-8	42-5½	No.	No.	Liberty.....12	1	400	W-Vee	Pro Swg	127.4	Se L.	.....	.....	45.0	.....	.....	11†
Heath.....**Favorite**	Tr Bi	Land Mac.	Pas & F	5	.....	.....	33-0	No.	No.	Curtiss.....OX5	1	90	W-Vee	Pro Swg	85.0	Se L.	.....	.....	36.0	.....	.....	.....
Huff-Daland.....**TA6**	Tr Bi	Land Mac.	Adv Tr	2	23-6	.....	31-0	No.	No.	Wright.....J1	1	200	A-Rad	Pro Swg	115.0	Se L.	.....	.....	....	8000	20600	.....
Kinner.....**Airster**	Tr Bi	Land Mac.	Ele Tr	2	19-6	7-6	26-5	No.	No.	Kinner.....K1	1	65	A-Rad	Pro Swg	80.0	500	70.0	500	30.0	1000	13000	5
Laird.....	Tr Bi	Land Mac.	Pas & F	6	28-6	10-7	44-7	No.	No.	Packard.....12	1	300	W-Vee	Hand Mag	93.0	Se L.	.....	.....	34.0	5200	18000	3½
Lawrence-Sperry.....	Tr Bi	Land Mac.	Sport	1	18-6	7-0	20-4	No.	Yes.	Wright.....L-4	1	60	A-Rad	Pro Swg	80.0	Se L.	65 0	5000	35.0	5000	.....	4
Lincoln-Standard.....**LS5**	Tr Bi	Land Mac.	Pas & F	5	.....	10-7	44-7	No.	No.	Hispano Suiza.....	1	180	W-Vee	Hand Mag	92.8	Se L.	86 0	Se L.	34 0	5200	18000	.....
Loening.....**1923**	Pu Mo	Fly B	Pas & F	5	.....	.....	42-0	No.	Yes.	Liberty.....12	1	400	W-Vee	Ele Mot	135.0	1000	120.0	1000	50 0	10000	25000	4
Loening.....**PA-2**	Tr Bi	Land Mac.	Fig S	1	19-9	8-8	28-0	No.	Yes.	Wright.....J2	1	350	A-Rad	Hand Mag	135.0	1000	120.0	1000	48.0	10000	20000	4
Loening.....	Tr Mo	Land Mac.	Fig S	1	26-3	8-3	31-0	No.	Yes.	Packard.....1237	1	300	W-Vee	Hand Mag	142.0	1000	130 0	1000	40.0	10000	22000	5
Loening.....**PW-2A**	Tr Mo	Land Mac.	Fig S	1	26-0	8-3	31-0	No.	Yes.	Wright.....H2	1	300	W-Vee	Hand Mag	146.0	1000	130 0	1000	40.0	10000	25000	5
Longren.....	Tr Bi	Land Mac.	Sport	2	19-0½	7-8	27-11	Yes.	Yes.	Wright.....L-4	1	60	A-Rad	Pro Swg	90.0	1000	80.0	1000	32.0	1000	19000	3½
Lapere.....**U.S.A.**	Tr Bi	Land Mac.	Recon	2	25-3	9-6	41-7½	No.	No.	Liberty.....12	1	420	W-Vee	Hand Mag	133.0	Se L.	.....	.....	.....	.....	.....	.....
L. W. F......**Owl**	Tr Bi	Land Mac.	Recon	3	53-9½	17-6	105-0	No.	No.	Liberty.....12	3	1200	W-Vee	Hand Mag	110.0	Se L.	.....	.....	55.0	6000	17000	11
Martin, Glenn L......**M20-1**	Tr Bi	Convert	Recon	3	33-3	12-6	43-6	No.	No.	Curtiss.....D12	1	350	W-Vee	Hand Mag	111.0	.....	80.0	.....	50.0	5500	12000	6
Martin, Glenn L......**MS-1**	Tr Bi	Seaplane	Fig S	1	17-7¾	8-0	18-0	No.	Yes.	Wright.....L-4	1	60	A-Rad	Hand Crk	97.0	Se L.	70 0	Se L.	49.0	4000	8400	2†
Martin, Glenn L......**66**	Tr Bi	Land Mac.	Mail C	1	27-10	12-1½	42-0	No.	No.	Wright.....E-4	1	190	W-Vee	Hand Mag	105.0	Se L.	80.0	Se L.	38.0	6000	14500	6½
Martin, Glenn L......**67**	Tr Bi	Convert	Ele Tr	2	31-2	13-5	42-0	No.	No.	Wright.....J-1	1	200	A-Rad	Hand Mag	114.0	Se L.	.....	.....	37.0	7700	18500	2½†
Mummert.....	Tr Mo	Land Mac.	Sport	1	14-1	20-0	20-0	No.	Yes.	Harley-Davidson.....	1	7	A-Vee	Pro Swg	75.0	Se L.	.....	.....	.....	.....	.....	12
Remington-Burnelli.....**RB-2**	Tr Bi	Land Mac.	Pas & F	30	43-2	18-8	85-0	No.	Yes.	Galloway Atlantic....	2	550	W-Vee	Ele Mot	105.0	5000	96.0	5000	55.0	2000	12500	6½
Swallow.....**1924**	Tr Bi	Land Mac.	Pas & F	3	24-0	8-8	30-0	No.	Yes.	Curtiss.....OX5	1	90	W-Vee	Pro Swg	95.0	1500	85.0	1500	35.0	.....	.....	5
Swanson.....**SS4**	Tr Bi	Land Mac.	Pas & F	2	21-7	8-6	28-0	No.	No.	Le Rhone.....80	1	80	A-Rot	Pro Swg	95.0	Se L.	.....	.....	35.0	600	.....	.....
Thomas Morse.....**S-9**	Tr Bi	Land Mac.	Adv Tr	2	20-10	8-8½	29-0	No.	No.	Wright.....J1	1	200	A-Rad	Hand Mag	117.0	Se L.	105.0	Se L.	48.0	1125	17000	2½
Verville-Sperry.....**R-3**	Tr Mo	Land Mac.	Rac	1	22-5	7-1	29-3	No.	Yes.	Curtiss.....D-12	1	500	W-Vee	Hand Mag	230.0	100	.....	.....	75.0	.....	.....	.....
Vought.....**UO1**	Tr Bi	Convert	Recon	2	22-1	9-4	34-1⅛	No.	Yes.	Wright.....J1	1	220	A-Rad	Hand Mag	137.0	Se L.	84.0	10000	50.0	9650	18886	4½
Vought.....**DE9**	Tr Bi	Land Mac.	Recon	2	24-3	9-3	34-2	No.	Yes.	Wright.....E2	8	180	W-Vee	Hand Mag	120.0	Se L.	75 0	10000	55.0	8000	18000	4
Vought.....**UF1**	Tr Bi	Land Mac.	Dek F	1	20-3	7-10	29-4½	No.	Yes.	Wright.....J3	1	220	A-Rad	Hand Crk	145.0	Se L.	95.0	10000	55.0	14000	23000	4½
Waco.....**6**	Tr Bi	Land Mac.	Sport	3	24-0	8-10	30-0	No.	No.	Curtiss.....OX	1	90	W-Vee	Pro Swg	88.0	Se L.	.....	.....	32.0	4650	19000	.....
Wright.....**DT4**	Tr Bi	Seaplane	Torp	2	34-1⅛	15-0⅛	20-2	Yes.	No.	Wright.....T-2	1	525	W-Vee	Hand Crk	107.0	Se L.	83 0	Se L.	58.0	2000	71000	3
Wright.....**F2W**	Tr Bi	Land Mac.	Rac	1	21-4	7-11½	22-6	No.	No.	Wright.....T3	1	650	W-Vee	Hand Crk	247.0	Se L.	.....	.....	72.0	.....	26700	6½
Wright.....**NW2**	Tr Bi	Seaplane	Rac	1	23-4½	11-7 7/16	27-11⅜	No.	No.	Wright.....T2	1	650	W-Vee	Hand Crk	186.0	Se L.	.....	.....	83.0	10000	21000	2†
Wright.....**Falke**	Tr Mo	Land Mac.	Fig S	1	28-0	.....	33-0	No.	Yes.	Wright.....H3	1	400	W-Vee	Hand Mag	160.0	Se L.	.....	.....	.....	.....	.....	2

ABBREVIATIONS:

†—At full throttle
‡—Dimensions in feet and inches
Ail—Ailerons
Amphib—Amphibian
A-Hor—Air Cooled Horizontal
A-Rad—Air Cooled Radial
A-Rot—Air Cooled Rotary
Adv-Tr—Advanced Training
A-Vee—Air Cooled Vee
Convert—Either Land Machine or Seaplane
DayB—Daylight Bombing
DekF—Deck Flying
EleMot—Electric Motor
EleTr—Elementary Training
FigS—Fighting Scout
FlyB—Flying Boat
GroA—Ground Attack
HandCrk—Hand Crank
HandMag—Hand Magneto
LandMac—Land Machine
MailC—Mail Carrier
NigB—Night Bombing
ProSwg—Propellor Swinging
Pas&F—Passengers and Freight
Rac—Racing
Recon—Reconnaissance
Rud—Rudder
SeL—Sea Level
Torp—Torpedo Carrier
TrBi—Tractor Biplane
TrMo—Tractor Monoplane
TrTr—Tractor Triplane
T&PTr—Tractor and Pusher Triplane
T&PB—Tractor and Pusher Biplane
T&PM—Tractor and Pusher Monoplane
TrQu—Tractor Quadraplane
Troop—Troop Carrier
W-Vee—Water Cooled Vee
W-Vet—Water Cooled Vertical
W-3"W"—Water Cooled Three Row Vee
W-4"X"—Water Cooled Four Row Vee

plane Specifications

Service or Ceiling Height (Ft.)	Endurance at Cruising Speed (Hrs.)	MAIN WINGS: Span Upper (Ft. Ins.)	Span Lower (Ft. Ins.)	Chord Upper (Ft. Ins.)	Chord Lower (Ft. Ins.)	Incidence Upper (Deg.)	Incidence Lower (Deg.)	AREAS: Main Wings (Sq. Ft.)	Tail Surfaces Horizontal (Sq. Ft.)	Tail Surfaces Vertical (Sq. Ft.)	MISCELLANEOUS: Gap (Ft. Ins.)	Stagger (Ins.)	Dihedral (Deg.)	Sweepback (Deg.)	Factor of Safety	WEIGHTS: Empty (Lbs.)	Full Load (Lbs.)	Useful Load (Lbs.)	Useful Per Cent of Total Load %	Weight Per H.P. (Lbs.)	Weight per Sq. Ft. Wing Surface (Lbs.)	Fuel Consumption: Oil (Gals.)	Gas (Gals.)	Control Surfaces Balanced	MAKE AND MODEL
9000	4½	73-11	64-0	6-3	6-3	5½	4	800.0	100.4	46.6	7-6½	0	2	0	....	4345	6400	2055	32.1	19.7	8.0	2.0	30	A R	Aeromarine....85
9000	8	103-9	74-4	8-0	8-0	4	4	1397.0	176.2	28.6	9-10½	0	1½	0	....	9300	14000	4700	33.6	21.2	10.0	4.0	60	A R	Aeromarine....75
9000	4	48-6	37-8	6-3	6-3	4½	3	504.0	64.0	32.5	6-6	12	2	0	6.0	2490	3420	1930	27.2	19.0	6.6	.28	16	Rud	Aeromarine....50
17000	4	50-0	45-0	5-0	7-0	2½	2½	540.0	60.0	21.8	5-11	16½	3	0	6.5	2875	4450	1575	35.4	10.6	8.2	1.0	24	A R	Aeromarine....AM-1
14000	7	65-0	48-6	7-0	5-1	4½	4½	652.0	88.5	43.1	6-10	23	3	0	5.5	3660	6100	2440	40.0	15.2	9.3	1.0	24	A R	Aeromarine....AMC
		40-0	None...	22-0	6-6	2½	0	290.0	.....	.....	None..	0	0	0	9.5	1990	1040	....	....	6.8	....	.....	9½	No	Bellanca....CF5
10000	12†	120-0	120-0	13-6	13-6	3½	3½	4017.7	561.8	234.8	19-5	12½	3	0	....	27132	42569	15437	36.2	17.7	10.6	.....	.....	A R	Barling....NBL-1
		54-0	54-0	8-4	8-4	1	1	844.0	74.2	32.3	7-1½	0	2	0	7.0	6929	9037	2108	23.4	12.9	10.7	.....	.....	E R	Boeing....GA2
22000	2½†	32-0	22-5	6-0	5-0	0	0	245.7	29.7	10.8	4-4	14	1	0	12.0	1930	2835	905	32.0	7.5	11.2	.....	.....	No	Boeing....Pw9
16400	2†	36-10	36-10	5-0	5-0	0	0	344.0	37.8	13.5	5-8	0	0	0	7.0	1955	2636	681	26.0	13.1	7.8	1.0	16	Rud	Boeing....V & B-1
	3½	29-0	29-0	5-6	5-6	1	1	293.0	36.3	13.6	5-2	24	0	0	7.0	1750	2400	6.50	27.0	12.6	8.2	1.0	13	No	Cox-Klemin....TW-2
	2†	18-0	18-0	3-0	3-0	2	2	100.0	12.5	6.0	3-6	10½	1½	0	7.0	650	1000	350	....	16.7	10.0	.....	.....	No	Cox-Klemin....XS-1
9460	2†	22-0	19-3	4-8	3-4	0	0	144.2	24.0	10.5	3-2	11½	0	0	13.0	1690	2071	381	18.4	4.1	14.3	1.0	41	No	Curtiss....1923 Navy
12000	3½†	33-0	33-0	6-0	6-0	2	2	365.0	47.6	13.7	6-0	0	1½	5	7.0	1704	2524	820	32.5	15.8	6.9	.8	13½	Ail	Curtiss....Mail
7700		74-2	74-2	7-11	7-11	2	2	1121.0	106.0	56.3	8-6	0	2	0	4.5	7244	12074	4830	40.0	14.4	10.7	3.6	71	Rud	Curtiss....NBS-1
27200	6	32-0	32-0	5-0	4-0	0	0	265.3	24.6	13.7	4-6½	34	0	0	10.0	1856	2761	905	32.8	6.0	10.4	.....	.....	A E R	Curtiss....PW-8
		19-0	19-0	3-10	3-10	0	0	135.9	17.4	9.2	3-10½	7½	0	0	....	1615	2120	505	23.8	4.6	15.8	.....	.....	No	Curtiss....R-6
23500	1½†	22-8	22-8	4-0	4-0	0	0	168.0	21.8	14.7	4-0	15	2	0	7.0	2119	2747	628	22.8	5.9	16.3	1.0	38	No	Curtiss....Seaplane
13500	2½†	25-0	25-0½	4-9	4-9	0	0	227.9	2.78	10.3	5-6	0	3	0	7.0	1443	1230	687	32.3	9.6	9.3	.8	18½	No	Curtiss....TS
14460	2½†	25-0	25-0½	4-9	4-9	0	0	227.9	27.8	10.3	5-6	0	3	0	7.0	1240	1927	687	35.6	8.7	8.5	.8	18½	No	Curtiss....TS
11000	3	44-10	32-7	6-0	6-0	2½	2½	432.0	.....	.....	5-11	5½	1	5	....	1500	2275	320	.....	9.4	5.3	.6	13	No	Curtiss....Standard
15000	3½	40-9	40-9	5-6	5-6	3½	3½	399.6	.....	.....	6-0	9½	1½	0	....	1732	2522	320	.....	10.8	6.3	.6	13	No	Curtiss....Oriole
7000	3½	50-3	38-7	5-0	5-0	3½	3½	400.0	.....	.....	6-4	0	2	0	....	1911	2726	320	.....	12.0	6.8	.6	13	A R	Curtiss....Seagull
7750		50-0	50-0	7-6	7-6	3	3	694.0	97.0	35.0	8-0	0	2	0	....	4591	7216	2625	36.6	18.0	10.3	.....	.....	No	Davis-Douglas....D.W.C.
	3½	34-9½	34-9½	6-4	6-4	.....	.....	288.0	.....	.....	.....	.....	.....	0	....	1690	2500	693	.....	.....	.....	.....	.....	Rud	Dayton Wright....Chummy
9500	9	51-0	51-0	7-6	7-6	3	3	722.0	92.0	28.0	8-0	0	2	0	6.0	4080	6930	2850	41.0	15.7	9.6	2.0	20	No	Douglas....DCT
9500	5½	50-0	50-0	7-6	7-6	3	3	707.0	93.2	38.9	8-0	0	2	0	6.0	3720	6485	2765	43.0	14.7	9.7	2.0	20	Rud	Douglas....DT2
	27	74-10	None...	14-11	None..	2½	0	958.0	.....	.....	0	0	0	0	....	5627	10750	5122	47.6	26.9	11.2	.....	.....	A E R	Fokker....TZ
		46-5	45-0	7-0	7-0	2½	2½	320.0	.....	.....	7-0	0	0	0	....	.....	5440	.....	.....	.....	.....	.....	.....	.....	Gallaudet....B-4
	11†	42-5½	42-5½	5-6	5-6	3	3	440.0	62.4	19.4	5-6	12	3	0	....	.....	.....	.....	.....	.....	.....	.....	.....	Rud	DeHaviland....4L
		33-0	30-0	5-0	5-0	....	....	300.0	.....	.....	.....	.....	.....	0	....	1400	.....	700	.....	.....	.....	.....	.....	No	Heath....Favorite
20000	....	31-0	23-6	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	....	1246	1964	718	.....	.....	.....	.....	.....	Rud	Huff-Daland....TA6
13000	5	26-5	26-5	4-0	4-0	1½	1½	200.0	26.0	9.0	4-6	10	2	0	7.0	550	1000	450	45.0	16.7	5.0	.5	3½	No	Kinner....Airster
18000	3½	44-7	30-0	6-0	6-0	....	....	447.0	48.2	34.8	6-0	5½	1	5	....	1735	2922	720	.....	16.2	6.5	.....	.....	.....	Laird
.....	4	20-0	20-0	4-0	4-0	2	2	155.0	.....	.....	.....	3-9	18	1½	0	6.5	581	1011	430	42.0	17.0	6.5	.50	4.2	No	Lawrence-Sperry
18000	....	44-7	32-0	6-0	6-0	....	....	447.0	26.0	16.6	6-0	5½	1	5	....	1735	2922	720	.....	.....	.....	.....	.....	.....	Lincoln-Standard....LS5
25000	4	42-0	None...	9-0	None..	4½	0	322.0	50.0	39.0	0	0	2	0	7.0	2685	4059	1374	34.0	10.0	12.5	2.0	20	A E R	Loening....1923
20000	4	28-0	28-0	5-0	5-0	1	0	282.0	26.0	8.0	4-9	22	0	0	9.0	1486	2459	973	39.0	7.0	8.5	2.0	20	Rud	Loening....PA-2
22000	5	34-0	None...	8-0	None..	2	0	236.0	39.0	10.0	0	0	0	0	9.0	1904	2739	845	30.0	9.0	11.0	2.0	18	Rud	Loening....PW-2A
25000	5	34-0	None...	8-0	None..	2	0	270.0	39.0	10.0	0	0	0	0	9.0	1793	2638	845	32.0	8.7	10.0	2.0	18	Rud	Loening....PW-2A
19000	3½	27-11	21-11	4-3	4-3	3	2	189.0	24.9	8.2	4-3	0	3	0	10.0	675	1175	500	42.0	19.5	6.2	.....	5	No	Longren
		39-4½	39-4½	5-6	5-6	....	....	405.6	.....	.....	.....	.....	.....	.....	....	2155	3791	.....	.....	.....	.....	.....	.....	.....	Lapere....U.S.A.
17000	11	105-0	105-0	11-0	11-0	4½	3½	2000.0	174.0	79.0	11-0	0	1	0	....	2000	2400	7600	.....	16.6	9.1	.....	.....	A E R	L. W. F....Owl
12000	6	43-6	35-3	6-6	5-9	2	2	462.0	55.0	21.0	5-10	....	1½	0	7.0	3059	4639	1580	34.0	12.4	10.0	.....	.....	Rud	Martin, Glenn L....M20-1
9400	2†	18-0	18-0	3-0	3-0	2	2	99.0	12.5	6.0	3-6	10½	1½	0	7.0	656	1006	350	35.0	16.8	10.2	.....	.....	No	Martin, Glenn L....MS-1
14500	6½	42-0	42-0	5-4	5-4	2	2	430.0	53.0	20.5	6-0	18	3	0	8.0	2121	3523	1402	40.0	17.6	8.2	.....	11	A R	Martin, Glenn L....66
18500	2½†	42-0	42-0	5-4	5-4	2	2	430.0	53.0	20.5	6-0	15	3	0	7.0	2091	2704	613	.....	13.5	6.3	.....	.....	A R	Martin, Glenn L....67
	12	20-0	None...	.....	None..	....	0	.....	.....	.....	0	0	0	0	....	300	.....	.....	.....	.....	.....	.....	.....	No	Mummert
12500	6½	78-0	78-0	10-6	10-6	2	2	1517.0	115.0	74.0	11-3	0	1½	3	7.0	8555	15600	7045	44.0	15.6	10.1	2.0	30	A E R	Remington-Burnelli....RB-2
.....	5	30-0	30-0	5-2	5-2	2	2½	295.0	35.0	11.0	4-10	16	1	0	7.0	1250	1950	700	57.0	21.7	6.8	.2	8	No	Swallow....1924
.....	....	28-0	28-0	4-4	4-4	1½	0	255.0	27.0	10.0	4-10	20	4	1½	....	980	1550	.....	.....	19.0	6.8	.....	.....	No	Swanson....SS4
17800	2½	29-0	29-0	5-6	5-6	1	½	296.0	30.3	12.0	4-10	27¾	1½	0	8.6	1248	661	1909	35.0	9.5	6.4	.6	16	No	Thomas Morse....S-9
		29-3	None...	7-10	None..	1	0	144.3	23.3	11.7	None..	0	0	0	....	1892	2380	488	20.4	4.7	16.5	.....	.....	No	Verville-Sperry....R-3
18000	4½	34-1½	34-1½	4-10½	4-10½	1½	2½	295.5	36.4	14.0	4-8	11½	1½	0	10.0	1407	2218	811	36.0	10.2	7.7	.2	15	No	Vought....UO1
18000	4	34-2	34-2	4-8	4-8	1½	2½	290.0	36.4	11.4	4-8	11½	1½	0	8.0	2164	2800	636	29.2	12.0	7.5	.....	.....	No	Vought....DE9
22000	4½	29-4½	29-4½	5-0	5-0	0	0	270.0	30.0	9.2	5-0	0	0	0	8.0	1300	1978	678	35.0	8.7	7.3	.2	12	No	Vought....UF1
19000	....	30-0	30-0	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	....	1125	.....	750	.....	.....	.....	.....	.....	No	Waco....6
21000	3	50-0	50-0	7-6	7-6	3	3	707.0	93.2	35.1	8-0	0	.....	2	....	4992	7757	2765	36.0	14.8	11.0	.....	27.5	No	Wright....DT4
25700	6½	22-6	22-6	4-4	4-4	0	0	174.0	26.8	14.9	4-4	0	0	0	....	2424	2858	434	15.0	4.4	16.5	.....	.....	No	Wright....F2W
21000	2†	27-11½	27-11½	5-3	5-3	1½	1½	266.0	46.5	22.5	6-0	0	2½	0	....	3565	4447	882	20.0	6.84	16.7	.....	.....	No	Wright....NW2
.....	2	33-0	None...	6-6	None..	0	0	200.0	.....	.....	None..	0	0	0	....	1819	2674	855	.....	.....	.....	.....	.....	Rud	Wright....Falke

ABBREVIATIONS:

†—At full throttle
‡—Dimensions in feet and inches
Ail—Ailerons
Amphib—Amphibian
A-Hor—Air Cooled Horizontal
A-Rad—Air Cooled Radial
A-Rot—Air Cooled Rotary
Adv-Tr—Advanced Training
A-Vee—Air Cooled Vee
Convert—Either Land Machine or Seaplane
DayB—Daylight Bombing
DekF—Deck Flying
EleMot—Electric Motor
EleTr—Elementary Training
FigS—Fighting Scout
FlyB—Flying Boat
GroA—Ground Attack
HafidCrk—Hand Crank
HandMag—Hand Magneto
LandMac—Land Machine
MailC—Mail Carrier
NigB—Night Bombing
Pas&F—Passengers and Freight
ProSwg—Propellor Swinging
Rac—Racing
Recon—Reconnaissance
Rud—Rudder
SeL—Sea Level
Torp—Torpedo Carrier
TrBi—Tractor Biplane
TrMo—Tractor Monoplane
TrTr—Tractor Triplane
T&PTr—Tractor and Pusher Triplane
T&PB—Tractor and Pusher Biplane
T&PM—Tractor and Pusher Monoplane
TrQu—Tractor Quadraplane
Troop—Troop Carrier
W-Vee—Water Cooled Vee
W-Vet—Water Cooled Vertical
W-3"W"—Water Cooled Three Row Vee
W-4"X"—Water Cooled Four Row Vee

Foreign Airplane Specifications

MAKE AND MODEL	GENERAL CHARACTERISTICS: Class	Type	Designed For	Seating Capacity	OVERALL DIMENSIONS: Length (Ft. Ins.)	Height (Ft. Ins.)	Width (Ft. Ins.)	Wings of Folding Type?	ENGINE: Make	Number and Total H.P.	Type and Cooling	PERFORMANCE: Maximum Speed M. P. H.	Maximum Speed Altitude (Ft.)	Landing Speed M. P. H.	Climb Altitude (Ft.)	Climb Minutes	Endurance at Cruising Speed (Hrs.)	MAIN WINGS: Span (Ft. Ins.)	Chord (Ft. Ins.)	Area (Sq. Ft.)	WEIGHTS: Fully Loaded (Lbs.)	Useful Load (Lbs.)	Per H. P. (Lbs.)	Per Sq. Ft. Wing Surface (Lbs.)
BRITISH																								
Armstrong-W.....Siskin 2	Tr Bi.	Land Mac.	Fig S...	1	21-6	9-6	28-4	No..	Siddeley.....	1-350	A-Rad....	150.0	10000	50	20000	18	1¾	24 -4 22-3	6-0 5-0	253	2400	400	6.9	9.5
Armstrong-W.....Awana	Tr Bi.	Land Mac.	Troop...	28	.....	.....	.....	Yes.	Napier.....	2-900	Details wit	held b	y Briti	sh G	overn	men	t							
Avro.....504-K	Tr Bi.	Land Mac.	Ele Tr..	2	29-0	10-5	36-0	No..	Le Rhone....	1-110	A-Rot.....	85.0	5000	37	5000	6½	3	36-0	4-10	345	1830	600	16.6	5.5
Avro.....504-L	Tr Bi.	Seaplane...	Ele Tr..	2	32-0	11-4	36-0	No..	Clerget.....	1-130	A-Rot.....	82.5	5000	40	10000	20	2½	36-0	4-10	375	2000	600	18.2	6.0
Avro.....533	Tr Bi.	Land Mac.	Recon...	3	37-0	12-6	60-0	No..	Siddeley.....	2-500	W-Vet....	123.0	5000	50	10000	12	5	60-0	7-6	817	7000	2500	14.0	8.5
Avro.....548	Tr Bi.	Land Mac.	Sport...	3	29-5	10-5	36-0	No..	Renault.....	1-80	A-Vee.....	75.0	5000	40	5000	15½	3	36-0	4-9½	330	1943	605	24.3	5.8
Avro.....552	Tr Bi.	Seaplane...	Adv-Tr..	2	32-1	11-10	36-0	No..	Wolseley....	1-210	W-Vee....	96.0	8000	47	10000	20½	....	36-0	4-10	330	2686	601	12.8	7.7
Avro.....552-A	Tr Bi.	Land Mac.	Adv-Tr..	2	28-11	10-5	36-0	No..	Wolseley....	1-210	W-Vee....	109.7	8000	44	10000	13½	....	36-0	4-10	330	2235	604	11.1	6.7
Avro.....Bomber	Tr Bi.	Land Mac.	Day B..	2	.....	.....	.....	No..	Napier.....	1-1000	W-4 "X"..	Detail	s withe	ld b	y Briti	sh G	over	nment						
Avro.....Arctic	Tr Bi.	Seaplane...	Recon...	2	22-5	9-7	26-3	No..	Le Rhone....	1-80	A-Rot.....	86.5	5000	49	8000	30	....	26-3 24-1	4-10	172	1589	589	18.5	9.3
Beardmore.....WB2	Tr Bi.	Land Mac.	Recon...	2	27-7	10-11	35-0	No..	Beardmore...	1-200	W-Vet....	105.0	10000	55	1000	19	3½	35-0	.....	35¼	2516	300	17.5	7.1
Blackburn.....Swift	Tr Bi.	Land Mac.	Tor C...	1	34-10	12-3	48-6	Yes.	Napier.....	1-470	W-3 "W"..	109.0	3000	45	10000	21	3½	48-6	7-9	720	6300	2718	13.4	8.7
Boulton & Paul.....P9	Tr Bi.	Land Mac.	Sport...	2	25-0	10-0	27-6	No..	R. A. F.....	1-90	A-Vee.....	101.0	1000	42	1000	8½	5	27-6	5-6	285	1800	620	18.0	6.3
Boulton & Paul.....P15	Tr Bi.	Land Mac.	Day B..	4	.....	.....	.....	No..	Napier.....	2-900	W-3 "W"..	Detail	s withe	ld b	y Briti	sh G	over	nment						
Boulton & Paul....Bodmin	T&PB	Land Mac.	Day B..	3	53-4	14-0	70-0	No..	Napier.....	2-900	W-3 "W"..	112.0	10000	....	6500	9	....	70-0	10-0	1350	11000	560	12.2	8.1
Bristol.....Fighter	Tr Bi.	Land Mac.	Recon...	2	25-0	10-0	39-5	No..	Bristol.....	1-400	A-Rad....	133.0	Se E..	48	20000	30	3	39-5	5-6	405	3372	1429	8.4	8.3
Bristol.....Taxiplane	Tr Bi.	Land Mac.	Pas & F.	3	23-3	8-10	31-2	No..	Bristol.....	1-100	A-Rad....	88.0	3000	40	7000	30	4½	31-2	5-3	284	2146	816	20.0	6.8
Bristol.....Tourer	Tr Bi.	Land Mac.	Pas & F.	2	23-3	8-10	31-2	No..	Bristol.....	1-100	A-Rad....	88.0	3000	40	7000	30	3½	31-2	5-3	284	2146	856	20.0	6.8
Fairey.....Model 3	Tr Bi.	Seaplane...	Recon...	2	36-0	14-0	46-1	No..	Napier.....	1-450	W-3 "W"..	116.0	12000	....	1300	1	....	46-1	5-6	500	.....	1650	.....	....
Gloucestershire....Mars 6	Tr Bi.	Land Mac.	Fig S...	1	18-6	9-0	28-0	No..	Siddeley.....	1-340	A-Rad....	150.0	Se L..	50	20000	26	3	28-0	5-3	270	2362	401	6.9	8.7
Gloucestershire....Mars 6	Tr Bi.	Land Mac.	Fig S...	1	18-6	9-0	28-0	No..	Bristol.....	1-400	A-Rad....	152.0	Se L..	50	20000	18	....	28-0	5-3	270	2370	401	5.9	8.7
Gloucestershire....Gloster	Tr Bi.	Land Mac.	Raci....	1	18-9	9-0	20-0	No..	Napier.....	1-450	W-3 "W"..	212.0	Sea L..	75	.....	....	1½†	20-0	4-7	164	2565	180	5.7	15.6
Gloucestershire....Gannet	Tr Bi.	Land Mac.	Sport...	1	16-6	5-6	6-9	Yes.	Blackburn...	1-7	A-Vee.....	75.0	1000	30	12000	45	2½	18-0	3-1½	103	450	178	30.0	4.3
Gloucestershire.....Mars	Tr Bi.	Land Mac.	Dek F...	1	19-6	9-6	28-0	No..	Bently.....	1-230	A-Rot.....	125.0	Se L..	50	15000	21	2	28-0	5-3	270	2165	400	9.4	8.0
DeHaviland.....49	Tr Bi.	Land Mac.	Recon...	2	.....	.....	.....	No..	Rolls Royce..	1-370	W-Vee....	134.0	Se L..	....	10000	12	3½	.....	.....	.....	4200	308	.....	.....
DeHaviland.....50	Tr Bi.	Land Mac.	Pas & F.	5	30-0	11-5	43-0	No..	Siddeley.....	1-230	W-Vet....	112.0	3000	45	10000	25	4	43-0	5-6	439	3900	915	16.9	8.9
DeHaviland.....53	Tr Mo	Land Mac.	Ele Tr..	1	19-11½	6-6	30-1	No..	Blackburn...	1-7	A-Vee.....	75.0	1000	30	2500	8	2	30-1	4-6	120	500	175	27.0	4.1
DeHaviland.....9C	Tr Bi.	Land Mac.	Pas & F.	4	30-10	11-2	42-5	No..	Siddeley.....	1-230	W-Vet....	110.0	10000	49	10000	23	4½	42-5	5-6	434	3900	700	17.0	9.0
DeHaviland.....34	Tr Bi.	Land Mac.	Pas & F.	11	41-3	13-1½	51-4	No..	Napier.....	1-450	W-3 "W"..	120.0	1000	61	5000	10	3½	51-4	5-9	550	7200	1800	16.0	13.0
Handley-Paige.....T	Tr Bi.	Land Mac.	Tor C...	1	33-0	13-0	46-0	Yes.	Napier.....	1-450	W-3 "W"..	107.0	3000	45	5000	12	3½	46-0	6-9	580	6490	2835	14.4	9.0
Handley-Paige.....W8b	Tr Bi.	Land Mac.	Pas & F.	14	60-9	18-0	75-0	No..	Rolls Royce..	2-700	W-Vee....	100.0	1000	44	5000	15½	4½	75-0	10-0	1458	12500	5291	17.1	8.5
Handley-Paige.....W8a	Tr Bi.	Land Mac.	Pas & F.	14	60-9	18-0	75-0	Yes.	Napier.....	2-900	W-3 "W"..	120.0	Se L..	44	7000	10	3½	75-0	10-0	1458	12500	5291	14.0	8.6
Handasyde.....H-2	Tr Mo	Land Mac.	Pas & F.	7	33-3	9-0	47-0	No..	Rolls Royce..	1-360	W-Vee....	120.0	Se L..	45	.....	.....	.....	47-0	.....	.....	4500	1200	12.5	11.2
Parnall.....Possum	Tr Tr.	Land Mac.	Nig B...	3	.....	.....	.....	....	Napier.....	1-450	W-3 "W"..	Detail	s withe	ld b	y Briti	sh G	over	nment						
Parnall.....Panther	Tr Bi.	Land Mac.	Dek F...	2	24-11	10-6	29-6	No..	Bentley.....	1-230	A-Rot.....	116.0	6000	48	10000	12½	5½	29-6	6-3	336	2555	1001	11.1	7.6
Short.....Cromarty	Tr Bi.	Flying B..	Recon...	6	.....	.....	.....	No..	Rolls Royce..	2-1300	W-Vee....	Detail	s withe	ld b	y Briti	sh G	over	nment						
Supermarine.....2	Tr Bi.	Amphib...	Recon...	3	32-10	14-10	48-0	No..	Napier.....	1-450	W-3 "W"..	104.0	Se L..	45	.....	....	5	48-0	7-0	644	1790	....	....	....
Vickers.....Valentia	Tr Bi.	Flying B..	Recon...	5	58-0	22-6	112-0	No..	Rolls Royce..	2-1340	W-Vee....	110.0	Se L..	53	5000	12	8	112-0 83-0	10-6	2025	21300	7700	15.9	10.5
Vickers.....Vanguard	Tr Bi.	Land Mac.	Troop...	25	53-10	17-3	46-3	Yes.	Napier.....	2-900	W-3 "W"..	100.0	Se L..	47	5000	21	6	88-0	13-0	2182	17600	6690	20.0	8.1
Vickers.....Virginia	Tr Bi.	Land Mac.	Nig B...	4	50-7	17-3	44-3	Yes.	Napier.....	2-900	W-3 "W"..	100.0	Se L..	46	5000	17	13	86-6	13-0	2166	16660	7383	17.2	7.7
Vickers.....Vulcan	Tr Bi.	Land Mac.	Pas & F.	9	38-0	14-11	49-0	....	Napier.....	1-438	W-3 "W"..	110.0	Se L..	46	6000	17	3¾	49-0	9-3	834	6750	2351	15.4	8.1
Vickers.....Valparaiso	Tr Bi.	Land Mac.	Recon...	2	29-0	12-0	44-0	No..	Napier.....	1-486	W-3 "W"..	130.5	10000	50	1000	16	7	44-0 38-6	8-3 7-0	590	5450	2200	11.2	9.3
Vickers.....Viget	Tr Bi.	Land Mac.	Sport...	1	17-3	7-3	7-6	Yes.	Douglas.....	1-20	A-Hor.....	67.0	Se L..	28	6000	27	2	25-0	4-3	200	582	187	29.0	2.9
Westland.....Limousine	Tr Bi.	Land Mac.	Pas & F.	6	33-6	13-0	55-6	No..	Napier.....	1-450	W-3 "W"..	118.0	2000	51	6500	8	5½	55-6	7-3	730	6000	1030	13.3	8.2
Westland.....Limousine	Tr Bi.	Land Mac.	Pas & F.	6	28-6	10-9	42-9	No..	Rolls Royce..	1-275	W-Vee....	110.0	2000	52	6500	10	4½	42-9	6-3	500	4250	1040	15.4	8.5
AUSTRALIAN																								
A-A & E.....	Tr Bi.	Land Mac.	Pas & F.	6	31-6	11-0	45-6	No.	Liberty.....	1-400	W-Vee....	116.0	Se L..	....	6000	9½	....	45-6	6-0	380	4365	1565	.....	.....

ABBREVIATIONS:

Amphib—Amphibian
A-Hor—Air Cooled Horizontal
A-Rad—Air Cooled Radial
A-Rot—Air Cooled Rotary
Adv-Tr—Advanced Training
A-Vee—Air Cooled Vee
Convert—Either Land Machine or Seaplane
DayB—Daylight Bombing
DekF—Deck Flying
EleTr—Elementary Training
FigS—Fighting Scout
FlyingB—Flying Boat
LandMac—Land Machine
MailC—Mail Carrier
NigB—Night Bombing
Pas&F—Passengers and Freight
Raci—Racing
Recon—Reconnaissance
SeL—Sea Level
TorC—Torpedo Carrier
TrBi—Tractor Biplane
TrMo—Tractor Monoplane
TrTr—Tractor Triplane
T&PTr—Tractor and Pusher Triplane
T&PB—Tractor and Pusher Biplane
T&PM—Tractor and Pusher Monoplane
TrQu—Tractor Quadraplane
Troop—Troop Carrier
W-Vee—Water Cooled Vee
W-Vet—Water Cooled Vertical
W-3"W"—Water Cooled Three Row Vee
W-4"X"—Water Cooled Four Row Vee
†—At full throttle
‡—Dimensions in feet and inches

THE output of aluminum in the United States was larger in 1923 than in 1922, owing to the increased demand for aluminum by makers of automobiles and utensils, according to estimates issued by the Department of the Interior through the Geological Survey. In 1922 the domestic output was valued at $13,622,000. The large increase in demand is indicated by the fact that the imports of crude and alloy aluminum during the first nine months of 1923 were 1,500,000 pounds greater than in the same period of 1922, whereas the exports were only one-third as large.

Aluminum, 99 per cent pure, was quoted at 22 to 23 cents a pound at the beginning of the year, but the price increased at the rate of about 1 cent a month, so that by April quotations were 27 cents and in June 27½ cents a pound. In the last half of the year quotations were steady at 26 to 27 cents a pound. Foreign aluminum was sold at prices 2 to 3 cents a pound lower.

Foreign Airplane Specifications—Continued

MAKE & MODEL	CHARACTERISTICS				ENGINE				GENERAL DIMENSIONS					PERFORMANCE					WEIGHT		
									Main Wings					Speed		Climb					
	Class	Type	Designed For	Seating Capacity	Make	Number	Total Horse Power	Cooling Type & Medium	Span	Chord	Total Area (Sq. M.)	Height (M.)	Length (M.)	Full Throttle (Sea Level) Km. Per Hr.	Landing Km. Per Hr.	Altitude (M.)	Minutes	Endurance at Cruising Speed (Hrs.)	Empty (Kg.)	Useful Load (Kg.)	Per Square Meter of Wing Surface (Kg.)
FRENCH																					
Ateliers 1	TrMo	LandMac.	Fig 8	1	Hispano Suiza	1	300	W-Vee	12.0	2.4	28.2	3.0	7.0	230	75	5000	23	3	800	550	45.0
Besson H5	TrQu	Fly B.	Pas&F	16	Salmson	4	1000	A-Rad	29.0	2.2	250.0	7.0	21.0	135	80	3000		7	7000	3000	40.0
Blériot-Spad 56	TrBi	Land Mac.	Pas & F	6	G&R "Jupiter"	1	380	A-Rad	13.0		46.7	3.5	9.0	215					2045	500	44.0
Blériot-Spad 81	TrBi	Land Mac.	FigS	1	Hispano Suiza	1	300	W-Vee	9.6		30.0		6.4	220					1233	220	41.6
Blériot-Spad 115	TrBi	Land Mac.	Pas&F	16	Hispano Suiza	4	720	W-Vee	25.0		126.0	4.9	14.4	175					2900	1200	39.0
Borel	TrMo	Amphibian	Recon	2	Hispano Suiza	2	300	W-Vee	15.0	3.2	38.0	3.4	11.5	196	87			4	1885	700	49.6
Borel C-2	TrBi	Land Mac.	Recon	2	Hispano Suiza	1	300	W-Vee	11.4	1.6	33.0	3.0	7.1	335	80			2½‡	805	520	40.0
Borel CAP2	TrBi	Land Mac.	Recon	2	Hispano Suiza	1	300	W-Vee	13.0	1.9	39.0	2.9	9.2	248	90			4†	1000	750	44.8
Borel CAN2	TrBi	Land Mac.	Recon	2	Hispano Suiza	1	300	W-Vee	13.2	2.1	34.0	3.4	8.5	225	70			5†	940	710	48.5
Borel "Transport"	TrMo	Land Mac.	Pas&F	35	Lorraine Dietrich	3	1125	W-Vet			240.0	7.8	23.7	201	70			10†	5000	7000	50.0
Breguett XIX	TrBi	Land Mac.	Recon	2	Renault	1	450	W-Vee	14.8	2.5	46.6	3.3	8.9	226	90	6000	39	5	1350	750	45.0
Breguett XIX	TrBi	Land Mac.	DayB	2	Lorraine Dietrich	1	370	W-Vee	14.8	2.5	46.6	3.3	8.9	228	90	6000	43	5	1300	750	44.0
Breguett-Leviathan XXII	T&PB	Land Mac.	Pas&F	20	Lorraine Dietrich	4	1080	W-Vee	25.5		137.4	5.1	13.7	165	90	2000	20	6	4000	3030	53.0
Breguett-Leviathan XXII	T&PB	Land Mac.	Pas&F		Breguet	2	900	W-Vet	25.5		137.4	5.1	13.7	165	90	2000	20	6	4000	3030	53.0
Buscayl et	TrMo	Land Mac.	Train	2	Anzani	1	70	A-Rad	70.7	2.6	23.3	1.6	5.3	145	70	4000		13½	650	150	28.0
Buscayl et	TrMo	Land Mac.	FigS	1	Hispano Suiza	2	300	W-Vee	10.9	2.3	24.0	2.7	6.9	260	103	6000		250	1392	230	58.0
C.A.M.S. 33T	T&PB	Flying B.	Recon	3	Hispano Suiza	2	520	W-Vee	17.6		92.0	4.9	13.2	175				2	2600		43.5
C.A.M.S. 30E	PuBi	Flying B.	EleT	2	Hispano Suiza	1	140	W-Vee	12.4		43.0	3.1	9.3	155	75	2000	20	3	1000	170	29.5
C.A.M.S. 36-38	TrBi	Flying B.	Racing	1	Hispano Suiza	1	360	W-Vee	18.8			2.7	8.3	270		2000	5¼		941		66.7
Caudron C-60	TrBi	Land Mac.	Train	2	Clerget	1	130	A-Rot	10.2	1.4	26.2	2.6	7.5	157		1000	6½		505	160	
Caudron C-61	TrBi	Seaplane	Pas&F	8	Hispano Suiza	3	520	W-Vee	14.1		140.0	4.0	14.4	160				3¼	220	840	32.5
Farman Sport	TrBi	Land Mac.	Sport	2	Le Rhone	1	60	A-Rot		7.1			6.2	140	60					200	
Farman School	PuBi	Land Mac.	Train	2	Renault	1	80	A-Vee	17.6	2.1	52.2	3.7	9.6	100	50	2000	20	3		210	
Farman F70	TrBi	Land Mac.	Pas&F	5	Lorraine	1	370	W-Vee	14.9	1.9	53.5	3.4	10.1	180		4500	56	3	1339	725	38.5
Farman B2	TrBi	Land Mac.	DayB	2	Lorraine	1	370	W-Vee	17.0	2.0	63.0	3.8	10.7	180				5	1854	1012	45.5
Farman	TrMo	Land Mac.	Sport	1	Salmson	1	12	A-Rad	10.5	1.5	15.0	2.2	5.6	80				7	105	90	7.0
Farman	T&PMo	Land Mac.	Pas&F	13	Hispano Suiza	4	720	W-Vee	19.0	6.0	81.0	5.8	14.0					4	2920	2140	62.5
Farman	TrMo	Land Mac.	Pas&F	2	Hispano Suiza	1	180	W-Vee	10.8	4.0	28.0	2.7	9.3	200				5	750	400	41.2
Farman	T&PBi	Land Mac.	Pas&F	18	Salmson	4	920	A-Rad	25.5	3.0	147.0	4.9	14.8					4	3860	2440	43.0
Farman BM	TrBi	Land Mac.	Nig B	3	Farman	1	600	W-3"W"	22.3	3.0	130.0	5.2	14.3					5	3145	2055	40.0
Gourdon-Lesurre	TrMo	Land Mac.	Racing	1	Bristol "Jupiter"	1	450	A-Rad	7.8		12.0		7.2	240		9000			930		
Hanriot 14	TrBi	Land Mac.	EleTr	2	LeRhone	1	80	A-Rot	9.7	7.2	36.0		10.2	130	45	4000					
Hanriot 32	TrBi	Land Mac.	EleTr	2	LeRhone	1	80	A-Rot	9.2	7.2	37.1		10.2	135	50	4500			550	780	22.3
Hanriot 19	TrBi	Land Mac.	AdvTr	2	Hispano Suiza	1	180	W-Vee	8.7	7.2	28.0		9.2	180	70	5000			510	250	24.5
Hanriot 27	TrBi	Land Mac.	FigS	1	Hispano Suiza	1	180	W-Vee	9.6	6.1	25.0		7.2	210	90	6000			660	290	34.5
Hanriot 20	TrBi	Land Mac.	DekF	1	Hispano Suiza	1	180	W-Vee	12.5	8.1	40.0			200	45	7500					
Hanriot 26	TrBi	Land Mac.	FigS	1	Salmson	1	260	A-Rad	9.0	7.3	18.0			260	95	8500					
Hanriot 25	TrBi	Land Mac.	DayB	3	Hispano Suiza	2	600	W-Vee	17.0	13.0	70.0			220	65	5500					
Hanriot M	TrBi	Land Mac.	Sport	1	Salmson	1	15	A-Rad	8.0	5.6	12.0			100	45	3000					
Latham 1923	T&PB	Flying Boat	Racing	1	Lorraine Dietrich	2	800	W-Vee	12.4		52.0		11.0						2700		
Lioré & Oliver 13	TrBi	Land Mac.	AdvTr	8	Hispano Suiza	2	500	W-Vee	16.0	1.9	58.2	3.7	11.5						1600	540	45.5
Lioré & Oliver H13	TrBi	Flying Boat	Pas&F	5	Hispano Suiza	2	500	W-Vee													
Morane-Saulnier AI	TrMo	Land Mac.	FigS	1	LeRhone	1	120	A-Rot	8.8	1.6	13.0	2.4	5.8		90	3000	8½	3	405	120	40.8
Morane-Saulnier AR	TrMo	Land Mac.	Train	1	LeRhone	1	80	A-Rot	10.5	1.8	18.0	3.4	6.7		56	3000	19	3	420	230	36.0
Morane-Saulnier 43	TrBi	Land Mac.	AdvTr	2	Hispano Suiza	1	180	W-Vee	10.8		28.5	3.1	8.8	164		4000	22½	4	800	170	
Nieuport-Astra 38	TrBi	Land Mac.	EleTr	2	Hispano Suiza	1	180	W-Vee	11.0		37.2	3.5	8.0						850	250	
Nieuport-Astra Hauter	TrBi	Land Mac.	Racing	1	Hispano Suiza	1	400	W-Vee	14.0		34.0		6.8			8500	24		746	120	28.4
Nieuport-Astra 33	TrBi	Land Mac.	AdvTr	1	Hispano Suiza	1	320	W-Vee	10.0		32.0		7.7	200		3000	10		882	230	40.0
Potez VIII	TrBi	Land Mac.	AdvTr	2	Anzani	1	70	A-Rad	8.0	1.4	20.0	2.5	5.7	145	50	2000	16		337	165	27.0
Potez XV	TrBi	Land Mac.	Recon	2	Lorraine	1	400	W-Vet	12.6	2.0	46.0	3.2	3.2	200	70	4000	23		1250	360	39.0
Potez XXII	TrBi	Land Mac.	Pas&F	12	G&R "Jupiter"	3	400	A-Rad	22.0	2.8	112.0	4.2	16.0	200	70	4000	33		3200	2200	48.0
Rohrbach	TrMo	FlyB	Pas&F	14	Rolls Royce "Eagle"	2	700	W-Vee	29.0				16.5	220	110	3000	8	8	3700		
Wibault 2Bn2	TrBi	Land Mac.	NigB	3	Renault	1	600	W-Vee	15.3		95.0	5.0	12.7	191	68	2000	10	5½	2195	1797	42.0
Wibault 3C1	TrMo	Land Mac.	FigS	1	Hispano Suiza	1	300	W-Vee	11.6	2.2	25.0	3.0	8.6	245	79	5000	16	4	998	448	57.8
Wibault 5C1	TrMo	Land Mac.	FigS	1	Lorraine Dietrich	1	450	W-3"W"	12.0	2.4	29.0	3.0	8.3	268	80	5000	14	4	1188	510	58.1
GERMAN																					
Albatross L58	TrMo	Land Mac.	Pas&F	8	Rolls Royce	1	275	W-Vee	18.0	3.0	44.5	3.6	10.9	145	100	2000	47	4.1	2280	880	51.5
Albatross L59	TrMo	Land Mac.	Sport	1	Siemens	1	55	A-Rad	10.3	1.5	10.0	2.8	5.4	155	105	2000	20	4.5	540	180	54.0
Albatross L60	TrMo	Land Mac.	Sport	2	Siemens	5	80	A-Rad	10.3	1.5	10.0	2.8	5.4	160	110	2000	18	3.5	600	230	60.0
Caspar Le12	TrMo	Land Mac.	Pas&F	10	Mercedes	1	260	W-Vet	20.0			3.5	11.2							1320	
Caspar S1	TrMo	Seaplane	Recon	2	Maybach	1	260	W-Vet	17.5			3.8	12.6							700	
Caspar Le11	TrMo	Land Mac.	Pas&F	2	Siemens	1	80	A-Rad	12.0			2.2	6.6	163							
Dornier "Libelle"	TrMo	FlyB	Sport	3	Siemens Halske	1	50	A-Rad	9.8	3.6	15.7	2.4	1.5	125	80	3000	55	2.5	400	240	40.8
Dornier "Komet"	TrMo	Land Mac.	Pas&F	7	B.M.W.	1	185	W-Vet	17.0	3.0	47.4	3.1	9.5	170	80	4000	50	6.5	1300	750	45.3
Dornier "Delphin"	TrMo	Fly B	Pas&F	8	Rolls Royce "Falcon"	1	260	W-Vee										6.0	1450	750	46.5
					B.M.W.	1	185	W-Vet	17.1	3.0	47.4	3.1	11.5	165	80	3000	58	6.5	1500	750	47.3
Dornier "Spatz"	TrMo	Land Mac.	Sport	3	Rolls Royce "Falcon"	1	260	W-Vee										6.0	1600	650	47.3
					Siemens Halske	1	70	A-Rad	9.8	1.6	15.7	2.6	7.0	140	80	3500	60	2.0	445	275	45.8
Dornier "Wal"	T&PMo	Fly B	Sport	10	Bristol "Lucifer"	1	100	A-Rad													
					Rolls Royce "Eagle"	2	720	W-Vee	22.5	4.3	96.2	4.5	16.1	190	84	4000	50	6.0	3400	1600	49.0
					Liberty	2	800	W-Vee						205			45		3050	1600	48.5
Dornier "Falke"	TrMo	Land Mac.	FigS	1	Hispano Suiza	1	300	W-Vee	10.0	2.0	24.0	2.6	7.4	265	85	6000	22	3.5	830	362	59.4
District DP11	TrBi	Land Mac.	Sport	1	Siemens	1	70	A-Rad	7.6			2.4	5.9	145		3800			340	220	
District DP111	TrMo	Land Mac.	Pas&F	8	Siddeley "Puma"	1	230	W-Vet	17.0			3.6	12.5	150		8000			1300		
Heinkel HE3	TrMo	Convert	AdvTr	3	Siemens Halske	1	80	A-Rad	10.4		10.4	2.3	7.8	150		1000	6		46		46.5
Junkers F	TrMo	Convert	Pas&F	6	B.M.W.	1	200	W-Vet	17.8	3.0	35.7	3.3	9.6	165	80	1000	12	6.5	1200	650	19.0
Junkers K	TrMo	Land Mac.	Pas&F	3	Siemens	1	100	A-Rad	11.0	1.8	15.2	2.7	8.0	145	80				430	250	7.5
Junkers T	TrMo	Land Mac.	Pas&F	3	Siemens	1	70	A-Rad	13.0	2.0	19.2	2.7	7.5	145	80	2000	24	4.0	440	350	8.5
Junkers A	TrMo	Seaplane	Sport	2	Mercedes	1	160	W-Vet	15.1	2.2	28.0	3.3	9.5	160	80	2000	26	6.0	990	270	14.1
Junkers U	TrMo	Land Mac.	Sport	2	LeRhone	1	110	A-Rot	13.0	2.1	21.0	2.7	7.2	135	80	2000	20	3.5	506	500	10.0

For abbreviations see page 460.

Foreign Airplane Specifications—Continued

MAKE & MODEL	CHARACTERISTICS				ENGINE				GENERAL DIMENSIONS					PERFORMANCE					WEIGHT		
									Main Wings					Speed	Climb						
	Class	Type	Designed For	Seating Capacity	Make	Number	Total Horse Power	Cooling Type & Medium	Span	Chord	Total Area (Sq. M.)	Height (M.)	Length (M.)	Full Throttle (Sea Level) Km. Per Hr.	Landing Km. Per Hr.	Altitude (M.)	Minuets	Endurance at Cruising Speed (Hrs.)	Empty (Kg.)	Useful Load (Kg.)	Per Square Meter of Wing Surface (Kg.)
GERMAN—Cont.																					
L.F.G. V20	TrMo	Seaplane	Pas&F	6	Benz	1	185	W-Vee	15.6	2.7	40.0	3.6	9.8	170	80	1000	8	4.0	1250	660	47.8
L.F.G. V26	TrMo	Seaplane	Pas&F	6	Benz	1	185	W-Vee	14.4	2.7	36.0	3.5	9.4	170	80	1000	9	4.0	1180	660	51.2
L.F.G. VL13	TrBi	Land Mac.	Pas&F	5	Benz	1	220	W-Vee	17.5	2.3	71.5	3.4	10.2	130	80	1000	7	4.0	1300	680	27.7
L.V.G. V111	TrBi	Land Mac.	Train	2	Mercedes	1	120	W-Vet	2.5	.....	.....	2.5	7.8	120	60	3000	28.8	2.5	710	310	.....
L.V.G. K1	TrBi	Land Mac.	Racing	1	Benz	1	200	W-Vet	13.0	.....	.....	2.8	7.4	145	65	3000	23.	12.0	720	640	.....
L.V.G. G111	TrBi	Land Mac.	Pas&F	4	Maybach	2	520	W-Vet	24.5	.....	.....	3.0	10.2	130	60	3000	20.	5.5	2960	1140	.....
Nordflug	TrMo	FlyB	Sport	2	Siemens	1	55	A Rad	7.3	.....	10.0	.....	5.0	100	.....	1000	8.	.....	200	70	.....
Sablating	TrMo	Land Mac.	Pas&F	2	Siemens	1	60	A-Rad	9.0	.....	12.7	1.9	5.1	130	.....	.....	.....	9.0	310	270	.....
Stahlwerke 23	TrBi	Land Mac.	School	2	Siemens Halske	1	55	A-Rad	10.0	.....	14.0	.....	6.0	.....	.....	.....	.....	.....	510	.....	.....
Stahlwerke RV	TrBi	Land Mac.	Pas&F	4	Mercedes	1	100	W-Vet	14.2	2.0	27.0	.....	.....	150	.....	1000	8.	4.0	800	480	.....
Udet	TrMo	Land Mac.	Sport	1	Haacke	1	35	A-Rad	8.9	.....	8.8	.....	5.5	155	48	.....	.....	.....	.....	.....	.....
Udet	TrMo	Land Mac.	Sport	2	Siemens	1	55	A-Rad	10.0	.....	6.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
ITALIAN																					
Ansaldo A4	TrBi	Land Mac.	Recon	2	FIAT	..	300	W-Vee	11.2	1.9	39.5	2.9	8.7	200	40	1000	3½	3½	1200	500	5.6
Ansaldo A201	TrBi	Land Mac.	DayB	1	S.P.A.	1	200	W.Vet	10.9	1.9	35.5	2.7	8.3	205	30	1000	5½	4.0	875	500	38.7
Caproni	T&PTi	Land Mac.	NigB	4	Isotta Fraschini	3	450	W-Vet	22.7	2.1	96.0	3.8	11.0	144	70	1000	6.	4.	2600	1000	37.5
Caproni	T&PTi	Land Mac.	NigB	4	FIAT	3	600	W-Vet	29.9	2.3	200.0	6.3	13.1	135	65	1000	6.	4.	4000	2500	32.5
Caproni	T&PTi	Land Mac.	NigB	4	Liberty 12	3	1080	W-Vet	29.9	2.3	200.0	6.3	13.1	155	70	3000	23.	4	4200	3000	36.0
Caproni	T&PBi	Land Mac.	Recon	9	S.P.A.	3	600	W-Vet	23.4	2.7	130.0	4.4	12.6	150	65	2000	15.	4	3000	1500	35.0
Caproni 1923	T&PBi	Land Mac.	NigB	3	S.P.A.	3	600	W-Vet	20.7	2.9	120.0	4.2	10.8	189	80	1000	6.	4	2700	1700	44.0
Caproni 1923	T&PBi	Seaplane	Torpc	3	F.F.V.	3	720	W-Vet	20.7	2.9	160.0	4.7	11.2	160	85	2000	20	4	3300	1500	48.0
Caproni LV4	T&PBi	Land Mac.	NigB	4	S.P.A.	4	800	W-Vet	25.0	3.7	143.0	5.6	12.5	181	87	5000	60.	4	3400	2100	38.4
FIAT RS	TrBi	Land Mac.	Recon	2	Hispano Suiza	1	300	W-Vee	11.2	.....	36.0	2.8	7.5	150	.....	4000	21.	3.5	1000	800	44.5
FIAT A-L	TrBi	Land Mac.	Pas&F	6	FIAT	1	300	W-Vet	14.7	2.1	56.2	3.2	8.9	200	100	2000	15.	6.5	1550	750	41.0
FIAT B-R	TrBi	Land Mac.	DayB	2	FIAT	1	700	W-Vee	15.5	2.3	70.5	3.8	10.1	250	105	2000	7½	4.5	2300	1200	50.0
FIAT C-R	TrBi	Land Mac.	FigS	1	Hispano Suiza	1	300	W-Vee	7.3	1.5	23.0	.....	.....	280	105	5000	14.	3.	765	335	48.0
FIAT R	TrBi	Land Mac.	Racing	1	FIAT	1	700	W-Vee	10.6	1.6	32.5	3.1	7.7	325	125	.....	.....	1.2	1800	350	66.0
Gabardini	TrBi	Land Mac.	FigS	1	LeRhone	1	110	A-Rot	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gabardini	TrMo	Land Mac.	EleTr	1	.....	1	....	A-Hor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Savoia 12	PuBi	FlyB	DayB	2	Ansaldo	1	450	W-4"X"	15.0	2.2	52.2	3.8	11.5	222	120	4000	29.	4.	1600	2400	.....
Savoia S13	PuBi	FlyB	FigS	2	Isotta Fraschini	1	250	W-Vet	11.0	1.9	32.8	3.1	9.0	200	110	5000	42	4.	875	475	.....
Savoia S16	PuBi	FlyB	Pas&F	6	FIAT	1	300	W-Vee	15.5	2.2	59.1	3.6	9.9	165	90	3000	48	6.	1700	800	.....
Savoia S16	PuBi	FlyB	DayB	3	FIAT	1	300	W-Vee	15.5	2.2	59.1	3.6	9.9	165	90	3000	48	6.	1700	800	.....
Savoia MVT	TrBi	Land Mac.	Pas&F	1	SPA	1	220	W-Vet	8.7	.....	42.0	2.7	7.2	250	100	5000	17	2.	670	230	.....
Savoia S51	PuBi	FlyB	DayB	1	Hispano Suiza	1	300	W-Vee	.....	.....	.....	.....	9.9	280	105	5000	27	3	830	320	.....
Savoia S53	PuTi	FlyB	Pas&F	5	Hispano Suiza	2	260	W-Vee	15.5	2.2	59.1	3.6	9.9	150	90	3000	48	4	1800	760	.....
Savoia S55	P&TTi	FlyB	DayB	6	FIAT	2	1220	W-Vee	.....	.....	93.0	3.6	16.0	150	90	3000	45	4	2800	4300	.....
Savoia S56	PuBi	FlyB	Train	3	LeRhone	2	220	A-Rot	.....	.....	28.0	2.5	8.0	130	65	3000	35	4	75	160	.....
DUTCH																					
Fokker FIII	TrMo	Land Mac.	Pas&F	5	Siddeley Puma	1	230	W-Vet	16.0	.....	42.0	3.2	10.3	175	70	3000	25	5	1200	700	.....
Fokker FVII	TrMo	Land Mac.	Pas&F	10	Rolls Royce	1	360	W-Vee	21.5	.....	.....	3.7	13.5	190	80	3000	35	6	1955	1300	.....
Fokker SII	TrBi	Convert	Train	2	LeRhone	1	110	A-Rot	10.1	.....	25.6	2.8	7.5	175	60	3000	17	4	685	370	.....
Fokker IV	TrBi	Land Mac.	Recon	2	Liberty 12	1	400	W-Vee	‡37.0	.....	41.0	‡11.0	‡30.0	235	80	2500	6	5	1300	700	.....
Fokker IV	TrBi	Land Mac.	Recon	2	Napier "Lion"	1	450	W-3"W"	‡37.0	.....	41.0	‡11.0	‡30.0	245	85	2500	6	5	.....	.....	.....
Fokker CIVW	TrBi	Seaplane	Recon	2	Liberty 12	1	400	W-Vee	‡37.0	.....	‡41.0	‡11.0	‡30.0	214	80	5000	31	3½	1650	700	.....
					Napier "Lion"	1	450	W-3"W"	‡37.0	.....	‡41.0	‡11.0	‡30.0	230	85	5000	24	3½	1750	700	.....
Fokker DXI	TrMo	Convert	FigS	1	Hispano Suiza	1	300	W-Vee	11.2	.....	21.0	2.9	7.2	250	85	8000	12	2½	950	300	.....
Fokker B1	TrMo	Amphibian	Recon	4	Napier "Lion"	1	450	W-3"W"	18.2	2.4	55.0	3.3	12.0	200	75	.....	.....	4	1800	800	.....
Fokker B11	TrMo	FlyB	Recon	2	Rolls Royce	1	360	W-Vee	14.6	.....	40.0	3.8	9.8	200	75	1000	6	4	1300	800	.....
Fokker TIIIW	TrMo	Seaplane	Recon	2	Liberty	1	400	W-Vee	21.2	4.5	72.0	4.0	12.6	167	60	3000	38	4	2580	1500	.....
					Napier "Lion"	1	450	W-3"W"	21.2	4.5	72.0	4.0	12.6	175	70	3000	38	4	2580	1500	.....
Fokker 2TIV	TrMo	Convert	NigB	4	Rolls Royce	2	700	W-Vee	23.0	.....	.....	3.0	14.0	185	90	2000	25	8	3500	1600	.....
Koolhoven FK31	TrMo	Land Mac.	Recon	2	Bristol "Jupiter"	1	400	A-Rad	11.3	2.2	24.0	3.3	7.8	250	79	1000	1½	4	950	600	64.4
Koolhoven	TrMo	Land Mac.	Recon	2	Bristol "Jupiter"	1	400	A-Rad	13.7	2.2	28.0	3.3	7.8	225	80	1000	2½	6	975	775	62.5
AUSTRIAN																					
Hopfner S1	TrMo	Land Mac.	Pas&F	3	Mercedes	1	100	W-Vet	12.0	.....	27.0	2.5	7.5	145	.....	.....	.....	4	800	.....	42.5
ROUMANIAN																					
Sesefsky	TrBi	Land Mac.	Recon	2	Astra-Benz	1	250	W-Vet	41.4	.....	39.4	10.2	28.2	115	56	3000	5	.....	2469	661	9.0
HUNGARIAN																					
Szebeny 100	TrMo	Land Mac.	EleTr	2	Mercedes	1	100	W-Vet	11.4	.....	.....	2.3	.....	140	.....	1000	6½	.....	580	.....	.....
SWISS																					
Algis	TrMo	Land Mac.	Sport	1	Haacke	1	30	A-Hor	.....	.....	.....	.....	.....	120	.....	.....	.....	.....	190	.....	.....
CZECHOSLOVAKIAN																					
Aero A18	TrBi	Land Mac.	FigS	1	B.M.W.	1	185	W-Vet	7.7	1.4	15.8	2.6	6.0	240	120	5000	8½	2¼	650	250	57.0
Aero A12	TrBi	Land Mac.	FigS	2	Maybach	1	260	W-Vet	12.0	1.7	37.0	3.1	8.3	195	105	5000	25	4.	1030	550	43.0
Smolik 6	TrBi	Land Mac.	Recon	1	Maybach	1	260	W-Vet	13.1	.....	.....	.....	8.6	175	.....	6500	.....	7.	1100	700	.....
Smolik SM8	TrMo	Land Mac.	Racing	1	Napier "Lion"	1	450	W-3"W"	.....	.....	.....	.....	.....	220	.....	.....	.....	.....	.....	.....	.....
SWEDISH																					
Tummelisa	TrBi	Land Mac.	EleTr	2	Thulin	1	90	A-Rad	.....	.....	.....	.....	.....	160	.....	5000	.....	.....	.....	.....	.....
Phoenix S21	TrBi	Land Mac.	Recon	2	Maybach	1	260	W-Vet	.....	.....	.....	.....	.....	160	.....	5000	.....	.....	.....	.....	.....
JAPANESE																					
Itoh 22	TrBi	Land Mac.	Recon	2	Liberty 12A	1	400	W-Vee	12.3	1.5	36.3	2.8	8.4	140	60	1000	3	5	1211	839	56.4

For abbreviations see page 460.

American Aircraft Engine Specifications

MAKE & MODEL	CYLINDER DATA							RATING				CONSUMPTION			WEIGHT		CARBURETERS		IGNITION SYSTEM			STARTING		INSTALLATION DIMENSIONS				
												Per Brake H.P.Hour												Overall			
	Arrangement	Cooling Medium	Number	Bore & Stroke (Ins.)	Piston Displacement (Cu. Ins.)	Compression Ratio	Brake M.E.P. (Lbs. Per Sq. In.)	Mfrs. Rated H.P. at Specified R.P.M.	Brake H.P. at Specified R.P.M.	Normal Crankshaft R.P.M.	Propellor Shaft R.P.M.	Gas (Lbs.)	Oil (Lbs.)	Approx. Gallons Gas (Imp.) Per Hour	Engine Dry (Lbs.)	Per Brake H.P. (Lbs.)	Make	Number	Make	Current Source	Number	Make (If Electric)	Method	Length (Ins.)	Height (Ins.)	Width (Ins.)	Height Above Engine Bed (Ins.)	Center to Center of Engine Bearers
Aeromarine.....S12	Vee 60°..	Wat..	12	6¼x6½	2390	5.50	136	622–1650	.....	1650	1650	.....	.....	.....	1150	....	Stro..	4	Spli...	M..	2	None..	HC...	70	40½	37¾	26½	16½
Aeromarine.....U873	Vee 60°..	Wat..	8	4⅝x6¼	873	5.50	136	250–1800	300–2000	1800	1800	.48	.02	21	525	1.95	Stro..	2	Spli...	M..	2	Bijur..	(EM.. HC..	51	32	32	22	14½
Aeromarine.....T6	Vertical.	Wat..	6	5¼x6½	844	5.20	132	200–1700	255–1800	1700	1700	.55	.02	20	569	2.23	Stro..	2	Spli...	M..	2	None..	HC...	63	36½	19½	26½	16
Aeromarine.....NAL	Vee 45°..	Wat..	12	5 x7	1650	5.40	125	450–1800	470–1800	1800	1800	.48	.02	....	915	1.95	Zeni..	2	Delc..	B...	2	None..	HC...	70	45	30	30	18
Curtiss.....C6A	Vertical.	Wat..	6	4½x6	573	5.20	....	160–1750	165–1750	1750	1750	.50	.02	....	420	2.36	Zeni..	1	Berk..	M..	2	USL..	(EM.. HC..	57 19/32	40¾	23 1/32	24 11/32	15¾
Curtis.....OX5	Vee 90°..	Wat..	8	4 x5	502	4.90	....	90–1400	100–1400	1400	1400	.49	.02	8¼	377	3.77	Zeni..	1	Berl...	M..	1	None..	PS....	55⅜	35⅛	30	17¾	12⅞
Curtis.....D12	Vee 60°..	Wat..	12	4½x6	1145	5.30	138	375–2000	400–2000	2000	2000	.50	.01	37	680	1.70	Stro..	2	Spli...	M..	2	Bijur..	EM...	56¾	34¾	28¼	21½	15¾
Curtis.....D12	Vee 60°..	Wat..	12	4½x6	1145	5.30	142	460–2000 375–2000	410–2000	2000	2000	.53	.01	35	690	1.68	Stro..	2	Spli...	M..	2	None..	HM...	56 7/32	34¾	28¼	21⅝	15¾
Engine Div....U.S. Air	3-W....	Wat..	18	5½x6½	2780	5.42	126	700–1700	750–1700	1700	1700	.50	.02	65	1800	2.40	Stro...	6	Spli...	M..	4	Bijur..	EM...	90¾	53¼	39¼	28¾	18
Engine Div....U.S. Air	Horiz...	Air...	2	3 x3	42	....	116	.....	15–2400	3000	3000	.52	.....	....	50	2.50	Stro...	1	Bosc..	M..	1	None..	PS....	12⅜	19	24¾	.....	0
Liberty.....U.S. Air	Vee....	Wat..	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Delc..	B...	2	.....	.....	.....	.....	.....	.....	.....
Packard.....1A-2025	Vee 60°..	Wat..	12	5 x5¼	2025	5.50	126	550–1800	580–1800	1800	1800	.52	.02	50	1188	2.04	Zeni..	2	Spli...	M..	2	None..	HM...	72 13/32	45¼	31¾	26 7/32	17¾
Packard.....1A-1237	Vee 60°..	Wat..	12	5 x5¼	1237	6.50	137	350–1800	380–1800	1800	1800	.48	.02	30	739	1.94	Stro...	2	Spli...	M..	2	None..	HM...	62 33/64	37 1/16	27¾	25	14½
Packard.....1A-1551	Vertical.	Wat..	6	6⅝x7½	1551	6.50	128	300–1400	350–1400	1400	1400	.45	.02	26	1138	3.25	Stro...	1	Delc..	B...	1	None..	HC...	66⅝	44½	31⅝	32	18¾
Rogers.....B4	Vertical.	Air...	4	3⅝x4	....	.....	.....	40–	45–	.....	.....	.41	.01	....	140	2.80	Sche..	1	A-K..	B...	1	None..	PS....	.....	.....	.....	.....	.....
Sturtevant.....5A	Vee 90°..	Wat..	8	4 x5½	555	5.30	99	140–2000	170–2600	2000	1200	.55	.04	13	500	2.95	Zeni..	2	Spli...	M..	2	None..	CA...	56	35	34	22	13¾
Sturtevant.....5A4½	Vee 90°..	Wat..	8	4½x5½	700	6.40	106	210–2250	240–2800	2250	1350	.55	.04	19	480	2.00	Zeni..	2	Spli...	M..	2	None..	HM...	56	35	34	22	13¾
Wright (Lawrence)..J1	Radial..	Air...	3	4½x5	212	5.00	125	60–	65–	1800	1800	.50	.01	....	175	2.70	Stro...	1	Spli...	M..	1	None..	PS....	17 †	38¾*	38¾*	0	0
Wright (Lawrence)..J3	Radial..	Air...	9	4½x5½	788	5.30	128	200–1800	230–1800	1800	1800	.52	.02	....	450	1.96	Stro..	1	Spli...	M..	2	None..	HC...	24 31/32	43½*	43½*	0	0
Wright.....T3	Vee 60°..	Wat..	12	5¾x6¼	1947	5.30	124	525–1800	550–2000	1800	1800	.52	.02	45	1175	2.24	Stro...	2	Spli...	M..	2	None..	HC...	65⅝	42 11/32	30⅞	26¼	17
Wright.....T3	Vee 60°..	Wat..	12	5¾x6¼	1947	6.50	138	525–1800	680–1800	2000	2000	.50	.02	54	1175	1.81	Stro...	2	Spli...	M..	2	None..	HC...	65⅝	42 11/32	30⅞	26¼	17
Wright.....H3	Vee 90°..	Wat..	8	5½x5½	1126	6.00	134	375–2000	400–2100	2000	2000	.52	.02	....	624	1.56	Stro...	1	Spli...	M..	2	None..	HC...	52 11/32	39¾	38⅝	23½	14⅝
Wright.....E4	Vee 90°..	Wat..	8	4 13/32x5 7/64	719	5.30	122	190–1800	200–1800	1800	1800	.52	.02	....	477	2.38	Stro...	1	Spli...	M..	2	None..	HC...	49⅜	33¾	33⅞	17⅞	13 9/32

ABBREVIATIONS:
†—Distance from Engine Plate to front of Crankcase
*—Outside Diameter of Cylinders
B—Battery

Berk—Berkshire
Berl—Berling
Bosc—Bosch
CA—Compressed Air
Clau—Claudel
Delc—Delco
EM—Electric Motor
Fel—Fellows
HC—Hand Crank
HM—Hand Magneto
Horiz—Horizontal
M—Magneto
PS—Propellor Swinging
Sche—Schebler
Spli—Splitdorf
Stro—Stromberg
T-H—Thomson Bennett
Wat—Water
Watf—Watford
Zeni—Zenith

British Aircraft Engine Specifications

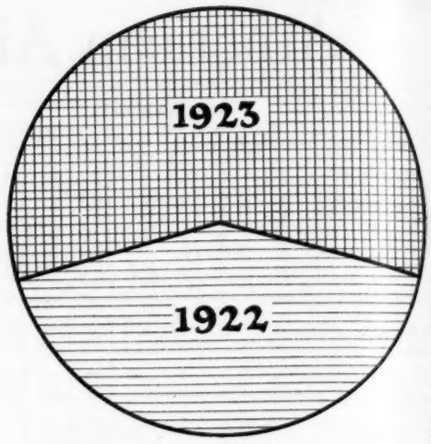
MAKE & MODEL	CYLINDER DATA							RATING				CONSUMPTION			WEIGHT		CARBURETERS		IGNITION SYSTEM			STARTING		INSTALLATION DIMENSIONS				
												Per Brake H.P.Hour												Overall			
	Arrangement	Cooling Medium	Number	Bore & Stroke (Ins.)	Piston Displacement (Cu. Ins.)	Compression Ratio	Brake M.E.P. (Lbs. Per Sq. In.)	Mfrs. Rated H.P. at Specified R.P.M.	Brake H.P. at Specified R.P.M.	Normal Crankshaft R.P.M.	Propellor Shaft R.P.M.	Gas (Lbs.)	Oil (Lbs.)	Approx. Gallons Gas (Imp.) Per Hour	Engine Dry (Lbs.)	Per Brake H.P. (Lbs.)	Make	Number	Make	Current Source	Number	Make (If Electric)	Method	Length (Ins.)	Height (Ins.)	Width (Ins.)	Height Above Engine Bed (Ins.)	Center to Center of Engine Bearers
A.B.C.....Scorp	Horiz...	Air...	2	3 9/16x3 9/16	731	4.00	96	12–	24–2500	1850	1850	.58	.03	1¼	90	3.75	Zeni..	1	Fel...	1	..	None..	PS....	.....	15 *	15 *	15	0
A.B.C.....Dragon	Radial..	Air...	9	5½x6¼	1389	4.60	110	300–	340–1760	1650	1650	.58	.03	22½	600	1.76	Own..	2	M-L..	M..	2	None..	PS....	23½†	50½*	50½*	0	0
A.B.C.....Wasp. II	Radial..	Air...	7	4¾x6¼	775	4.57	99	150–	176–1820	1650	1650	.58	.03	11½	350	1.75	Own..	2	M-L..	M..	2	None..	PS....	17½†	42¾*	42¾*	0	0
Beardmore.....160	Vertical.	Wat..	6	5⅝x6 9/16	1014	4.80	107	160–	192–	1250	1250	.53	.02	10½	615	3.60	Zeni..	2	Watf..	M..	2	Yes...	HM...	65¾	31½	31½	27½	17
Bristol.....Lucifer	Radial..	Air...	3	5¾x6¼	486	5.00	109	100–1600	118– 760	1600	1600	.54	.03	7½	325	3.25	Clau..	1	T-H..	M..	2	None..	HC...	19¾†	49⅜*	49⅜*	0	0
Bristol.....Jupiter 4	Radial..	Air...	9	5¾x7½	1752	5.00	113	380–1575	436–1750	1575	1575	.53	.03	28	750	1.97	Clau..	3	BTH..	M..	2	None..	Gas...	20½†	57¼*	57¼*	0	0
Bristol.....Cherub	Horiz...	Air...	2	3 11/16x3 5/16	66	5.50	104	20–2500	35–4000	2500	2500	.53	.04	1½	75	3.70	Zeni..	1	Watf..	M..	1	None..	PS....	9 †	26 *	26 *	0	0
Condor.....Series III Rolls Royce	Vee 60°..	Wat..	12	5½x7½	2136	5.30	126	650–1900	650–1900	1900	907	.51	.02	45	1320	2.03	Clau..	1	BTH..	M..	2	None..	Gas...	65⅝	45½	30½	60 5/16	26
Eagle.....Series IX Rolls Royce	Vee 60°..	Wat..	12	4½x6½	1236	5.20	127	360–1800	360–1800	1800	1080	.51	.02	25	965	2.68	Clau..	2	Watf..	M..	4	None..	HC...	73	46	32	63⅛	24
Falcon.....Series III Rolls Royce	Vee 60°..	Wat..	12	4 x5¾	864	5.12	127	250–1800	250–1800	1800	1061	.53	.02	18	705	2.82	Clau..	4	BTH..	M..	2	None..	HM...	65	41½	30 5/16	60⅝	24
Green.....4	Vertical.	Wat..	4	.....	.....	.....	35	.....	.....	.....	.....	.58	.01	....	185	.....	Zeni..	1	BTH..	M..	1	None..	PS....	.....	.....	.....	.....	.....
Napier.....CUB	4-X....	Wat..	16	6¼x7½	3681	5.20	116	975–1800	1050–1980	1800	872	.48	.03	63	2400	2.36	Clau..	4	BTH..	M..	4	None..	HM...	84¼	53¼	56½	30⅛	32
Napier.....Lion	3-"W"..	Wat..	12	5½x5½	1461	5.80	122	450–2000	470–2000	2000	1318	.49	.03	30	900	2.00	Clau..	2	BTH..	M..	2	None..	HM...	61½	36	41¾	26¼	17
Napier.....Lion	3-"W"..	Wat..	12	5½x5½	1461	5.00	115	425–2000	445–2000	2000	1318	.52	.03	30	900	2.12	Clau..	2	BTH..	M..	2	None..	HM...	61½	36	41¾	26¼	17
Siddeley.....Lynx	Radial..	Air...	7	5 x5½	760	5.00	120	160–	190–	1500	1500	.48	.02	10¼	470	2.48	Zeni..	.....	.....	M..	..	None..	PS....	37 †	22½*	22½*	0	0
Siddeley.....Jaguar	Radial..	Air...	14	5 x5½	1511	5.00	120	325–	380–	1500	1500	.48	.02	21½	740	1.95	Zeni..	.....	.....	M..	..	None..	CA....	42 †	22½*	22½*	0	0
Sunbeam.....Dyak	Vertical.	Wat..	6	4¾x5½	544	.....	.....	100–	.....	1200	1200	.48	.05	6¾	399	.....	Clau..	.....	.....	M..	..	None..	HC...	65	38¾	23	25	13⅞
Sunbeam.....Arab	Vee 90°..	Wat..	8	4¾x5½	726	.....	.....	200–	.....	2000	2000	.48	.05	13½	517	.....	Clau..	.....	.....	M..	..	EM...	HC...	56	37	32	25	13
Sunbeam.....Cossack	Vee 60°..	Wat..	12	3⅝x6⅜	922	.....	.....	350–	.....	2000	1000	.48	.05	23½	1200	.....	Clau..	.....	.....	M..	..	None..	CA....	70½	38¾	38	26¾	15⅝
Sunbeam.....Sikh	Vertical.	Wat..	6	7⅛x8 11/32	1978	.....	.....	450–	.....	1400	1400	.48	.05	27	1120	.....	Clau..	.....	.....	M..	..	EM...	HC...	73¼	45	26¼	31	20½

ABBREVIATIONS:
†—Distance from Engine Plate to front of Crankcase
*—Outside Diameter of Cylinders
B—Battery

Berk—Berkshire
Berl—Berling
Bosc—Bosch
CA—Compressed Air
Clau—Claudel
Delc—Delco
EM—Electric Motor
Fel—Fellows
HC—Hand Crank
HM—Hand Magneto
Horiz—Horizontal
M—Magneto
PS—Propellor Swinging
Sche—Schebler
Spli—Splitdorf
Stro—Stromberg
T-H—Thomson Bennett
Wat—Water
Watf—Watford
Zeni—Zenith

1923 Biggest Automotive Export Year

American sales abroad exceed quarter of a billion dollars



Relative Size of 1922 and 1923 Automotive Export Values

By George E. Quisenberry
Editor, "El Automovil Americano"

FOREIGN trade brought to the automotive industry more than a quarter of a billion dollars in 1923. The exact total, calculated from official statements of export shipments from the United States and Canada covering passenger cars, trucks, tractors, motorcycles, tires and other accessory and equipment lines, is $260,685,914. The comparable figure for 1922 was $166,937,286, the gain having been nearly 60 per cent. This makes 1923 the largest year that the automotive industry ever has experienced in overseas trade.

To achieve this astounding increase—which was relatively much greater than that of the value of domestic sales—automotive exporters sent abroad 328,999 cars and trucks. Of these, 184,416 cars and 37,300 trucks were shipped from the United States and from plants located in Canada which supply much of the world with completed vehicles of a few well-known makes. The rest of the total is comprised of sales from the foreign assembly branches of the Ford Motor Co., located in Spain, France, Denmark, England, Argentina and Brazil. These amounted to 107,183 cars and trucks which, to make up the true picture of American automobiles sold abroad, must be added to the export shipments from this country and Canada.

Throughout the entire range of automotive exports, with two exceptions, large gains were recorded in the value of the shipments, despite the lower prices which were a general feature of the industry last year. The exceptions were in tire exports, which showed a slight decline in value as compared to 1923, although the number of units was larger, and in the airplane field. On the other hand, the value of passenger cars shipped from the United States increased from $51,039,335 to $90,696,272, while the Canadian sales rose from $21,059,574 to $29,324,031. Truck exports from this country nearly doubled those of 1923, while truck exports from the Canadian plants increased more than 400 per cent. A comparison of the exports by values is shown in an accompanying table.

By units, the increases were even more impressive. Gains are shown in every item except that of automobile engines. Although small, the decrease here is rather surprising in view of the great expansion in Ford foreign assemblies, but this is to be explained, perhaps, by some shift in shipments from this country or in the actual working out of the Ford policy. It is apparent, however, that the exports of automobile engines cannot be used as a criterion to show the course of the expanding trade in other countries.

A compilation of the shipments by units, revealing the manner in which the sales curve is ascending is given below.

Export Shipments by Value

	1922	1923
Passenger cars:		
From United States	$51,039,335	$90,696,272
From Canada	21,059,574	29,324,031
Motor trucks:		
From United States	8,279,733	15,313,853
From Canada	1,094,519	4,503,659
Parts:		
From United States	38,298,031	*60,019,678
From Canada	1,926,098	3,530,339
Tires:		
From United States	19,898,412	19,409,529
From Canada	4,459,262	6,330,419
Motorcycles	4,028,742	5,298,597
Automobile engines	5,132,754	5,917,547
Engine parts	2,700,861	3,402,991
Airplanes and parts	494,920	432,658
Tractors	5,959,019	12,852,970
Storage batteries	1,473,524	2,167,487
Spark plugs, magnetos	1,092,502	1,485,884
Total	$166,937,286	$260,685,914

*Includes automobile unit assemblies, $4,292,523; accessories and parts, $54,682,384, and automobile service appliances, $1,072,879. These items were not listed separately in 1922.

Export Shipments by Units

	1921	1922	1923
Passenger cars:			
From United States	30,950	66,791	127,035
From Canada	9,821	35,382	57,481
Motor trucks:			
From United States	7,480	11,443	24,861
From Canada	1,349	2,564	12,439
Ford foreign assemblies:			
Cars and trucks	42,000	68,858	*107,183
Total cars and trucks	89,600	185,038	328,999
Motorcycles	.....	15,976	22,112
Farm tractors	.....	10,214	20,543
Storage batteries	.....	111,004	149,448
Automobile engines	.....	44,986	43,242
Parts (pounds)	.....	160,524,142	271,287,288
Automobile tires:			
(From U. S.)			
Casings	.....	1,325,753	1,362,741
Inner tubes	.....	936,745	1,016,384
Solid	.....	55,665	96,849

*This figure is reported as sales from the Ford foreign assembly branches in 1923.

American Tire Exports from 1921 to 1923

Countries	1921				1922				1923			
	Casings	Inner Tubes	Solid	Total	Casings	Inner Tubes	Solid	Total	Casings	Inner Tubes	Solid	Total
Europe:												
Austria			$95	$95	$2,653			$2,653	$20,618	$2,348	$480	$23,446
Azores and Madeira Islands	$465	$4		469	1,234	$110		1,344	3,154	509		3,663
Belgium	63,582	10,733		74,315	117,071	8,603		125,674	104,382	8,789	210	113,381
Bulgaria					514	325		839	1,110	253	129	1,492
Czechoslovakia	7,794	774		8,568	12,528	636		13,164	7,391	515	265	8,171
Denmark	258,630	15,333	5,407	279,370	483,973	44,807	$24,309	553,089	569,318	61,695	16,145	647,158
Esthonia	4,316			4,316	4,249	669	974	5,892	11,725	1,935		13,660
Finland	43,959	1,472	2,414	47,845	35,929	4,428	1,321	41,678	56,529	7,714	1,108	65,351
France	380,985	2,673	700	384,358	275,251	10,951	3,744	289,946	81,967	5,206	2,965	90,138
Germany	11,868	1,415		13,283	10,761	1,915	256	12,932	52,551	5,362	659	58,572
Gibraltar	366	142		508	11,430	796	60	12,286	238		68	306
Greece	101,295	9,654	589	111,538	120,089	12,421	2,980	135,490	91,758	12,611	22,949	127,318
Hungary									5,640	584		6,224
Iceland and Faroe Islands	6,692	299		6,991	12,204	1,410	268	13,882	8,332	1,657	165	10,154
Italy	24,700	410		25,110	95,670	11,366	93	107,129	163,307	15,602		178,909
Latvia	47			47	257	23		280	4,036	3,087	9,907	17,030
Lithuania	1,214	202		1,416	2,524	527		3,051	4,561	747		5,308
Malta, Gozo and Cyprus Islands	11,801	4		11,805	19,062	1,548	250	20,860	6,867	526	288	7,681
Netherlands	95,794	14,310	1,924	112,028	193,125	15,812	5,566	214,503	184,864	19,740	5,301	209,905
Norway	284,487	15,511	20,258	320,256	404,717	36,228	20,552	461,497	349,286	40,040	44,197	433,523
Poland and Danzig	22,597	3,207	7,098	32,902	89,004	39,647	36,738	165,389	6,633	1,224	62	7,919
Portugal	16,694	432	40	17,166	87,316	6,779	5,439	99,534	29,840	2,227		32,067
Rumania	35,078	7,668	3,146	45,892	22,688	3,716		26,404	20,145	3,075	4,268	27,488
Russia					14,273	1,277		15,550	3,621	3,089	13,494	20,204
Spain	270,782	18,227	22,832	311,841	351,925	30,002	65,563	447,490	287,056	26,660	97,949	411,665
Sweden	510,247	34,730	21,265	566,242	801,105	74,346	19,945	895,396	617,106	57,031	24,441	698,578
Switzerland	94,552	1,824		96,376	26,742	1,999	64	28,805	64,793	6,250		71,043
Turkey	38,119	5,056	1,328	44,503	40,253	5,929	1,596	47,778	7,012	356	415	7,783
Ukraine					2,203			2,203	734	567		1,301
England	2,969,245	238,438	144,325	3,352,008	3,301,073	246,222	188,146	3,735,441	2,796,370	279,213	626,585	3,702,168
Scotland	3,899	203	288	4,390	20,239	1,333	206	21,778	40,228	3,391	20,055	63,674
Ireland	753	88		841	55,192	7,710		62,902	53,474	7,802		61,276
Yugoslavia, Albania and Fiume	18,776	430	1,530	20,736	40,344	9,072		49,416	20,666	4,038	456	25,160
North and South America:												
British Honduras	3,680	1,280	30	4,990	2,295	489		2,784	2,270	497	30	2,797
Canada	826,613	131,828	82,777	1,041,218	826,565	124,408	138,436	1,089,409	733,014	54,035	89,922	876,971
Miquelon, Langley, etc.							186	186	23		172	195
Newfoundland and Labrador	16,033	2,314	327	18,674	18,298	2,170		20,468	21,711	3,297	189	25,197
Costa Rica	6,969	1,013	1,368	9,350	19,400	1,917	478	21,795	15,898	2,063	1,512	19,473
Guatemala	36,360	4,693	633	41,686	47,792	3,258	1,169	52,219	20,096	2,278	466	22,840
Honduras	17,624	2,122	3,783	23,529	18,308	1,725	9,354	29,387	20,779	2,222	8,645	31,646
Nicaragua	10,180	1,951		12,131	6,157	1,095	61	7,313	7,634	989	803	9,426
Panama	114,596	20,486	11,974	147,056	108,855	14,064	11,321	134,240	112,055	13,151	11,177	136,383
Salvador	40,486	5,597	4,888	50,971	29,076	3,587	3,545	36,208	37,405	5,982	4,776	48,163
Mexico	1,173,826	142,697	51,730	1,368,253	1,014,935	167,733	78,839	1,261,507	780,020	113,883	43,556	937,459
Barbados	27,108	3,473	1,826	32,407	14,425	1,375	587	16,387	8,783	1,301	1,293	11,377
Jamaica	96,112	7,588	27,284	130,984	102,367	11,129	22,252	135,748	81,284	12,170	13,664	107,118
Trinidad and Tobago	95,274	10,584	16,783	122,641	57,327	8,634	13,146	79,107	42,413	6,945	3,656	53,014
Other British West Indies	16,023	2,449	1,263	19,735	10,564	2,261	909	13,734	17,963	3,436	236	21,635
Cuba	1,020,130	118,133	223,845	1,362,108	1,104,373	149,789	196,391	1,450,553	815,694	117,819	211,380	1,144,893
Dominican Republic	121,168	13,856	3,787	138,811	116,312	22,668	13,555	152,535	109,847	22,441	17,425	149,713
Dutch West Indies	16,004	1,698		17,702	12,962	2,276	258	15,496	10,941	2,761	60	13,762
French West Indies	16,071	2,132	2,695	20,898	37,326	2,894	4,341	44,561	15,053	561	1,004	16,618
Haiti	35,227	4,776	150	40,153	29,297	5,517	192	35,006	36,855	7,939	1,523	46,317
Virgin Islands of U. S.	12,505	2,221	14,501	29,227	7,929	1,685	89	9,703	4,388	931	281	5,600
Argentina	739,306	68,938	29,716	837,960	987,187	141,640	12,718	1,141,545	1,125,720	159,983	31,809	1,317,512
Bolivia	8,821	914	405	10,140	22,423	2,638	521	25,582	16,789	1,772	980	19,541
Brazil	211,553	6,252	8,889	226,694	531,943	53,665	46,314	631,922	301,511	36,695	17,697	355,903
Chile	92,321	12,939	7,078	112,338	157,386	20,824	9,538	187,748	183,438	22,568	8,837	214,843
Colombia	54,087	5,640	4,587	64,314	102,929	13,260	4,075	120,264	121,692	20,688	7,242	149,622
Ecuador	26,065	3,201	688	30,044	31,710	3,752	756	36,218	24,371	3,100	1,857	29,328
British Guiana	17,114	3,847	1,466	22,427	15,964	1,919	508	18,391	7,205	1,457	1,058	9,720
Dutch Guiana	3,893	508		4,401	6,339	1,451		7,790	3,380	498	94	3,972
French Guiana	200	122		322	664	37	48	749	309			309
Paraguay	376	127		503	2,008	112		2,120	660			660
Peru	142,881	17,770	15,228	175,879	183,103	17,348	10,453	210,904	188,609	24,238	13,886	226,733
Uruguay	152,145	4,968	751	157,864	278,357	13,561	339	292,257	207,222	20,241	13,028	240,491
Venezuela	125,595	14,342	2,540	142,477	160,068	26,575	2,234	188,877	138,582	27,635	4,013	170,230
Asia:												
Aden	8,150	399		8,549	10,518	870	60	11,448	10,641	1,152		11,793
Ceylon					12,468	470	1,296	14,234	33,293	4,920	12,547	50,760
British India	256,756	17,344	116,831	390,931	120,153	12,155	72,624	204,932	163,109	21,821	57,738	242,668
Straits Settlements	63,251	7,462	41,253	111,966	176,667	16,516	48,117	241,300	117,038	8,702	23,688	149,428
Other British East Indies	4,372	1,803	1,819	7,994		386		386				
China	117,597	5,422	3,566	126,585	71,015	7,242	5,758	84,015	83,556	8,857	11,383	103,796
Chosen	6,553	1,820		8,373	9,191	4,154		13,345	17,318	1,099		18,417
Java and Madura					230,911	22,602	40,081	293,594	169,944	15,353	65,798	251,095
Other Dutch East Indies	374,573	31,149	96,076	501,798	20,602	2,375	5,644	28,621	34,372	2,473	7,155	44,000
Far Eastern Republic					3,120	451		3,571				
French Indo-China	3,443	58		3,501	6,541	1,232		7,773	5,326	501	90	5,917
Greece in Asia	4,151	366	326	4,843	1,495	129		1,624				
Hejaz, Arabia and Iraq	8,287	449		8,736	27,041	4,522		31,563	24,452	2,981	204	27,637
Hongkong	40,974	2,343	5,178	48,495	6,618	498	2,795	9,911	23,289	2,345	2,451	28,085
Japan	146,071	10,860	34,546	191,477	123,792	2,732	35,382	161,906	568,083	40,533	150,226	758,842
Kwantung	106			106	130			130	5,612	770		6,382
Palestine and Syria	28,164	5,370	432	33,966	121,575	15,746	1,189	138,510	62,110	8,146	601	70,857
Persia	3,335	126		3,461	1,635	58		1,693	779	37	584	1,400
Philippine Islands	445,746	55,892	154,935	656,573	565,178	86,788	79,294	731,260	550,060	74,679	98,615	723,354
Russia										572		572
Siam	11,084	463	286	11,833	6,678	795	617	8,090	4,635	108	101	4,844
Turkey	53,446	6,771	1,980	62,197	584	119		703	849	157	172	1,178
Oceania:												
Australia	224,731	19,154	16,959	260,844	667,881	49,377	125,242	842,500	841,794	65,024	303,539	1,150,357
New Zealand	542,145	16,419	56,139	614,703	692,137	43,802	96,400	832,339	955,591	84,728	187,846	1,228,165
Other British Oceania	9,641	2,761	1,485	13,887	11,109	1,507	2,741	15,357	3,830	389	34	4,253
Other Oceania	4,093	331	497	4,921	5,841	488	986	7,315	4,988	917		5,905
French Oceania	10,192	1,075	3,739	15,006	4,333	425	1,493	6,251	5,214	1,036	1,996	8,246
Africa:												
Algeria and Tunis					4,851	278	290	5,419	3,613	1,678	1,205	6,496
Belgian Kongo									1,131	167		1,298
British West Africa	132,908	18,226	540	151,674	132,863	23,813	2,140	158,816	104,302	15,427		119,729
British South Africa	241,539	11,037	3,912	256,488	635,034	46,845	6,924	688,803	437,502	75,605	18,800	531,907
British East Africa	48,584	3,797	535	52,916	65,086	5,156		70,242	51,097	7,190	574	58,861
Canary Islands	23,609	998	344	24,951	45,858	4,364	4,623	54,845	46,470	3,951	15,156	65,577
Egypt	48,118	5,040		53,158	66,405	8,378	1,096	76,479	56,095	8,169	2,566	66,830
French Africa	2,609	495	2,638	5,742	7,895	387		8,282	904	8		912
Italian Africa									1,153			1,153
Kamerun	825	94		919								
Liberia	16	145		161	273	25		298				
Madagascar									102	14		116
Morocco	1,940	439	572	2,951	9,877	1,157	4,151	15,185	3,890	949	3,336	8,175
Other Portuguese Africa	174	208	1,262	1,644	10,059	2,093		12,152	4,080	883	1,090	6,053
Portuguese East Africa					1,100	278		1,378	3,299	1,193		4,492
Spanish Africa					7,881	1,309	18,706	27,896	4,518	376	3,908	8,802
Total	$13,422,266	$1,232,104	$1,300,081	$15,954,451	$16,604,637	$1,775,585	$1,518,932	$19,899,157	$15,292,965	$1,740,329	$2,376,235	$19,409,529

Passenger Car Exports

Country	1918	July 1 to Dec. 31 1918	1919	1920	1921	1922 Up to $800	1922 $800 to $2,000	1922 $2,000 & Over	1922 Total	1923 Up to $500	1923 500 to $800	1923 $800 to $2,000	1923 $2,000 & Over	1923 Total
Austria (1914-1920 A.-Hungary)	.....	.....	*12*	*13*	*21*	*8*	.....	.....	*8*	*37*	*29*	*13*	*2*	*81*
	.....	.....	$15,000	$7,927	$11,647	$3,035	.....	.....	$3,035	$17,234	$18,653	$15,084	$6,881	$57,852
Azores & Madeira Islands	.....	.....	*25*	*12*	*4*	*8*	*1*	.....	*9*	*19*	*2*	*5*	.....	*26*
	.....	.....	$12,078	$11,519	$3,135	$4,080	$1,400	.....	$5,480	$6,674	$1,181	$5,789	.....	$13,644
Belgium	.....	.....	*1,628*	*2,450*	*533*	*4,462*	*288*	*35*	*4,785*	*3,723*	*469*	*594*	*145*	*4,931*
	.....	.....	$1,784,133	$2,888,057	$379,193	$1,420,501	$318,116	$97,667	$1,836,284	$1,275,252	$275,229	$686,414	$418,899	$2,655,794
Bulgaria	.....	.....	*1*	*17*	*12*	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	$3,220	$21,105	$5,995	.....	.....	.....	.....	.....	.....	.....	.....	.....
Czechoslovakia	.....	.....	.....	.....	*2*	*40*	.....	.....	*40*	*9*	*1*	*4*	.....	*14*
	.....	.....	.....	.....	$1,040	$16,456	.....	.....	$16,456	$1,894	$550	$3,786	.....	$6,230
Denmark	*2*	*96*	*2,519*	*1,099*	*109*	*269*	*249*	*7*	*525*	*725*	*460*	*588*	*23*	*1,796*
	$4,100	$155,416	$2,961,948	$1,349,134	$159,586	$149,296	$259,397	$19,192	$427,885	$328,295	$306,883	$609,324	$78,953	$1,323,455
Esthonia	.....	.....	.....	.....	*1*	.....	*4*	.....	*4*	*100*	*8*	*13*	*1*	*122*
	.....	.....	.....	.....	$2,106	.....	$3,730	.....	$3,730	$28,550	$5,242	$16,278	$3,857	$53,927
Finland	.....	.....	*187*	*82*	*33*	*49*	*2*	*1*	*52*	*419*	*22*	*53*	*2*	*496*
	.....	.....	$254,378	$124,859	$44,250	$19,475	$1,953	$5,000	$26,428	$127,993	$14,565	$52,665	$4,716	$199,939
France	*1,169*	*495*	*866*	*582*	*153*	*248*	*66*	*41*	*355*	*171*	*61*	*50*	*30*	*312*
	$1,518,858	$331,144	$1,999,773	$933,234	$359,071	$125,623	$81,464	$169,934	$377,021	$75,557	$41,867	$66,819	$129,949	$314,192
Germany	.....	.....	.....	*37*	*22*	*16*	*25*	*5*	*46*	*11*	*8*	*37*	*8*	*64*
	.....	.....	.....	$72,319	$45,538	$5,602	$27,268	$15,078	$47,948	$4,900	$5,047	$51,694	$30,013	$91,654
Gibraltar	.....	.....	*34*	*86*	*8*	.....	*17*	.....	*17*	*18*	*7*	*8*	.....	*33*
	.....	.....	$27,493	$86,276	$10,653	.....	$19,979	.....	$19,979	$6,542	$3,550	$9,971	.....	$20,063
Greece	*4*	.....	*269*	*686*	*122*	*135*	*16*	*6*	*157*	*42*	*37*	*71*	*15*	*165*
	$6,580	.....	$407,822	$876,740	$130,048	$65,271	$19,560	$16,025	$100,856	$19,149	$29,225	$74,598	$37,679	$160,651
Hungary	.....	.....	.....	*2*	.....	*8*	.....	.....	*8*	*4*	.....	*9*	*1*	*14*
	.....	.....	.....	$3,500	.....	$3,407	.....	.....	$3,407	$1,918	.....	$11,666	$2,466	$16,050
Iceland & Faroe Islands	*15*	*25*	*74*	*31*	*7*	.....	*4*	.....	*4*	.....	.....	*2*	.....	*2*
	$11,396	$22,666	$58,526	$30,553	$8,450	.....	$4,278	.....	$4,278	.....	.....	$2,666	.....	$2,666
Italy	*129*	*21*	*26*	*604*	*29*	*218*	*18*	*10*	*246*	*1,935*	*54*	*20*	*18*	*2,027*
	$78,228	$32,345	$59,531	$682,263	$43,321	$67,354	$22,303	$43,410	$133,067	$541,678	$29,284	$29,086	$54,543	$654,591
Latvia	.....	.....	.....	.....	.....	*96*	*3*	*1*	*100*	*69*	*3*	*16*	*2*	*90*
	.....	.....	.....	.....	.....	$38,545	$3,000	$5,510	$47,055	$21,775	$2,154	$17,542	$4,400	$45,871
Lithuania	.....	.....	.....	.....	*1*	.....	.....	.....	.....	.....	.....	*8*	*1*	*9*
	.....	.....	.....	.....	$1,250	.....	.....	.....	.....	.....	.....	$8,975	$2,692	$11,667
Malta, Gozo & Cyprus	.....	.....	*29*	*146*	*59*	*73*	*4*	*2*	*79*	*116*	*9*	*25*	*1*	*151*
	.....	.....	$19,065	$129,504	$40,603	$27,871	$3,828	$5,550	$37,199	$43,687	$5,654	$27,723	$2,304	$79,368
Netherlands	.....	.....	*1,160*	*3,103*	*398*	*389*	*259*	*40*	*688*	*388*	*397*	*725*	*76*	*1,586*
	.....	.....	$1,387,680	$3,616,862	$427,776	$243,791	$274,533	$130,288	$648,612	$167,375	$265,303	$765,435	$220,371	$1,418,484
Norway	*97*	*187*	*1,835*	*3,200*	*55*	*961*	*212*	*3*	*1,176*	*2,192*	*208*	*659*	*11*	*3,070*
	$115,810	$398,266	$2,355,339	$4,025,685	$67,500	$278,772	$209,960	$7,892	$496,624	$720,715	$139,724	$672,750	$27,701	$1,560,890
Poland & Danzig	.....	.....	.....	*232*	*108*	*12*	*16*	.....	*28*	*140*	*23*	*48*	*3*	*214*
	.....	.....	.....	$237,139	$94,078	$7,462	$18,375	.....	$25,837	$40,758	$15,866	$55,178	$7,727	$119,529
Portugal	*223*	*26*	*320*	*540*	*18*	*11*	*49*	*2*	*62*	*93*	*29*	*134*	*11*	*267*
	$270,987	$38,228	$405,880	$843,837	$40,331	$6,305	$55,422	$8,085	$69,812	$35,858	$20,563	$161,795	$32,315	$250,531
Rumania	.....	.....	*310*	*173*	*124*	*23*	*3*	*9*	*35*	*2*	*14*	*50*	*15*	*81*
	.....	.....	$277,884	$150,634	$132,265	$8,179	$3,518	$29,467	$41,164	$988	$7,352	$58,001	$43,306	$109,647
Russia	*492*	*6*	*17*	*101*	*14*	*196*	*6*	*1*	*203*	*28*	*5*	*9*	*9*	*51*
	$1,136,400	$6,605	$8,426	$68,449	$19,564	$91,828	$5,723	$3,212	$100,763	$10,961	$3,415	$9,973	$32,036	$56,385
Spain	*1,205*	*459*	*1,458*	*3,796*	*421*	*1,148*	*853*	*110*	*2,111*	*2,700*	*1,432*	*2,022*	*176*	*6,330*
	$1,346,826	$610,844	$1,759,606	$5,576,482	$737,030	$496,743	$990,623	$322,701	$1,810,067	$944,597	$918,781	$2,320,171	$444,734	$4,628,283
Sweden	*95*	*1*	*1,546*	*5,398*	*920*	*2,127*	*927*	*9*	*3,063*	*3,837*	*969*	*1,889*	*49*	*6,744*
	$111,377	$2,800	$2,021,948	$6,766,770	$1,039,275	$856,298	$979,248	$24,415	$1,859,961	$1,441,153	$682,286	$1,919,923	$119,439	$4,162,801
Switzerland	*3*	*1*	*428*	*1,413*	*275*	*57*	*161*	*37*	*255*	*143*	*46*	*271*	*35*	*495*
	$1,533	$1,646	$472,549	$1,781,968	$409,619	$31,791	$181,471	$103,370	$316,632	$65,644	$27,962	$296,746	$87,652	$478,004
Turkey	.....	.....	*68*	*593*	*57*	*85*	*11*	.....	*96*	*20*	.....	*7*	*1*	*28*
	.....	.....	$52,504	$544,984	$54,106	$31,560	$14,816	.....	$46,376	$6,704	.....	$7,488	$3,275	$17,467
Ukraine	.....	.....	.....	.....	.....	.....	*12*	*3*	*15*	*4*	.....	*3*	*2*	*9*
	.....	.....	.....	.....	.....	.....	$13,025	$7,650	$20,675	$1,572	.....	$4,603	$7,147	$13,322
England	*742*	*88*	*5,150*	*18,732*	*853*	*2,849*	*1,218*	*86*	*4,153*	*3,317*	*1,912*	*2,034*	*129*	*7,392*
	$1,712,672	$134,102	$5,573,843	$20,964,717	$793,644	$1,617,732	$1,310,870	$303,225	$3,231,827	$1,143,267	$1,258,174	$2,024,323	$425,343	$4,851,107
Scotland	*150*	.....	*25*	*540*	*7*	*36*	*40*	*1*	*77*	*3*	*9*	*8*	*2*	*22*
	$217,000	.....	$34,633	$617,257	$5,025	$21,744	$38,448	$2,500	$62,692	$1,463	$6,321	$12,680	$6,201	$26,665
Ireland	.....	.....	*914*	*902*	*28*	*68*	*16*	*1*	*85*	*56*	*94*	*11*	*7*	*168*
	.....	.....	$897,065	$1,023,255	$21,349	$28,742	$17,645	$4,800	$51,187	$21,884	$63,674	$13,500	$23,112	$122,170
Yugoslavia, Albania & Fiume	.....	.....	.....	*11*	*35*	*12*	*4*	.....	*16*	*31*	*2*	*1*	*1*	*35*
	.....	.....	.....	$10,431	$29,119	$4,611	$4,060	.....	$8,671	$10,278	$1,549	$1,205	$2,677	$15,709
North and South America—														
British Honduras	*8*	*6*	*25*	*20*	*14*	*9*	*3*	.....	*12*	*2*	*4*	*1*	.....	*7*
	$6,858	$4,650	$15,598	$13,593	$9,988	$4,482	$3,396	.....	$7,878	$454	$2,519	$1,208	.....	$4,181
Canada	*12,985*	*1,625*	*8,826*	*8,047*	*5,243*	*4,468*	*5,013*	*735*	*10,216*	*1,123*	*4,081*	*5,159*	*620*	*10,983*
	$10,189,865	$1,461,776	$9,393,009	$10,872,591	$7,187,865	$2,595,827	$5,853,275	$2,120,579	$10,569,681	$338,574	$2,599,140	$5,639,828	$1,685,287	$10,262,829
Costa Rica	*199*	.....	*20*	*98*	*20*	*21*	*9*	.....	*30*	*15*	*26*	*22*	*2*	*65*
	$85,070	.....	$19,470	$116,291	$28,254	$12,423	$8,841	.....	$21,264	$5,568	$19,031	$24,232	$5,940	$54,771
Guatemala	*34*	*2*	*125*	*185*	*71*	*27*	*28*	*3*	*58*	*18*	*47*	*85*	*3*	*153*
	$46,657	$1,815	$151,667	$254,551	$102,141	$20,121	$31,660	$6,711	$58,492	$7,182	$34,121	$98,797	$9,456	$149,556
Honduras	*16*	*6*	*22*	*44*	*35*	*25*	*9*	.....	*34*	*38*	*2*	*13*	*2*	*55*
	$12,292	$11,093	$14,549	$42,248	$39,663	$11,065	$11,352	.....	$22,417	$13,797	$1,062	$14,962	$5,356	$35,177
Nicaragua	*49*	*28*	*71*	*157*	*9*	.....	.....	.....	.....	*4*	*6*	*8*	.....	*18*
	$32,031	$28,991	$61,923	$170,165	$11,044	.....	.....	.....	.....	$1,396	$4,296	$10,428	.....	$16,120
Panama	*129*	*13*	*173*	*316*	*267*	*111*	*76*	*4*	*191*	*109*	*66*	*247*	*6*	*428*
	$93,329	$13,864	$164,698	$323,929	$277,193	$59,231	$91,357	$9,450	$160,038	$42,167	$42,893	$298,505	$14,700	$398,265
Salvador	*54*	*32*	*86*	*191*	*16*	*13*	*39*	*5*	*57*	*9*	*34*	*66*	*10*	*119*
	$68,297	$36,884	$124,996	$287,088	$24,007	$9,227	$49,934	$13,915	$73,076	$4,235	$24,745	$73,677	$23,700	$126,357
Mexico	*2,578*	*770*	*2,850*	*4,089*	*6,750*	*5,331*	*1,775*	*173*	*7,279*	*4,856*	*1,158*	*1,449*	*96*	*7,559*
	$1,653,545	$793,614	$2,360,346	$3,525,210	$5,183,791	$2,280,558	$1,900,309	$459,934	$4,640,801	$1,645,806	$789,390	$1,530,452	$289,218	$4,254,866
Miquelon Langley etc	.....	.....	.....	.....	.....	.....	.....	.....	.....	*1*	.....	.....	.....	*2*
	.....	.....	.....	.....	.....	.....	.....	.....	.....	$300	.....	$1,600	.....	$1,900
Newfoundland & Labrador	*27*	*68*	*138*	*102*	*9*	*7*	*19*	.....	*26*	*34*	*8*	*48*	*2*	*92*
	$34,676	$72,887	$160,414	$148,518	$16,577	$3,465	$23,914	.....	$27,379	$12,117	$5,976	$56,411	$4,900	$79,404
Barbados	*58*	*4*	*76*	*144*	*57*	*22*	*5*	.....	*27*	*68*	*3*	*19*	.....	*90*
	$33,198	$3,300	$56,797	$118,663	$43,799	$8,570	$5,801	.....	$14,371	$25,351	$2,038	$18,473	.....	$45,862
Jamaica	*236*	*43*	*121*	*421*	*221*	*273*	*100*	*55*	*378*	*269*	*148*	*162*	*2*	*581*
	$149,673	$39,701	$116,425	$401,789	$165,013	$138,160	$110,886	$13,615	$262,661	$104,752	$105,792	$171,493	$5,682	$387,719
Trinidad & Tobago	*161*	*19*	*182*	*450*	*124*	*102*	*18*	.....	*120*	*146*	*32*	*18*	*1*	*197*
	$100,571	$18,474	$137,564	$414,674	$97,929	$46,682	$17,474	.....	$64,156	$52,899	$21,657	$18,389	$6,500	$99,445
Other British West Indies	*80*	*24*	*53*	*153*	*85*	*134*	*29*	*12*	*175*	*116*	*13*	*35*	*2*	*166*
	$50,009	$15,603	$35,966	$127,046	$62,199	$52,091	$34,535	$37,593	$124,219	$39,888	$8,894	$39,844	$8,600	$97,226
Cuba	*2,975*	*871*	*2,887*	*6,293*	*1,692*	*1,291*	*254*	*144*	*1,689*	*4,513*	*568*	*689*	*233*	*6,003*
	$3,029,813	$1,295,485	$3,121,228	$7,096,895	$1,428,162	$497,676	$331,138	$400,522	$1,229,336	$1,260,036	$411,145	$825,081	$661,166	$3,157,428
Dominican Republic	*248*	*99*	*173*	*593*	*102*	*135*	*42*	*6*	*183*	*461*	*56*	*111*	*8*	*636*
	$157,607	$87,290	$174,204	$577,560	$85,848	$52,419	$50,918	$15,576	$118,913	$163,158	$36,351	$125,845	$20,058	$345,412
Dutch West Indies	*12*	*2*	*13*	*59*	*39*	*42*	*7*	.....	*46*	*58*	*4*	*11*	*1*	*74*
	$7,435	$1,295	$7,369	$67,376	$21,059	$16,917	$4,914	.....	$21,831	$19,864	$2,267	$10,841	$2,150	$35,122
French West Indies	*248*	*25*	*156*	*148*	*22*	*14*	*3*	.....	*17*	*10*	.....	*21*	.....	*31*
	$146,698	$21,561	$137,929	$129,713	$20,647	$5,972	$2,829	.....	$8,801	$3,826	.....	$18,783	.....	$22,609
Haiti	*102*	*22*	*179*	*202*	*36*	*91*	*16*	.....	*107*	*50*	*65*	*65*	*4*	*184*
	$54,613	$18,408	$158,594	$171,293	$26,173	$52,387	$19,141	.....	$71,528	$19,090	$46,724	$69,569	$10,476	$145,859
Virgin Is	*23*	*13*	*27*	*69*	*45*	*10*	*1*	.....	*11*	*9*	*1*	*5*	.....	*15*
	$12,313	$9,194	$20,010	$46,925	$27,359	$3,698	$1,300	.....	$4,998	$3,677	$741	$5,710	.....	$10,128
Argentina	*3,525*	*559*	*2,202*	*4,597*	*613*	*1,245*	*1,147*	*105*	*2,497*	*2,253*	*1,740*	*2,445*	*207*	*6,645*
	$2,668,898	$708,853	$2,711,232	$5,828,057	$580,991	$783,063	$1,222,150	$301,854	$2,307,067	$1,005,907	$1,136,911	$2,567,587	$594,317	$5,304,722
Bolivia	*152*	*4*	*14*	*24*	*4*	*3*	*5*	*4*	*12*	*6*	*6*	*58*	*6*	*76*
	$105,408	$8,548	$13,846	$39,639	$17,036	$1,503	$5,926	$11,727	$19,156	$2,557	$4,405	$69,613	$15,993	$92,568
Brazil	*1,575*	*442*	*3,273*	*6,251*	*285*	*833*	*782*	*57*	*1,672*	*283*	*513*	*1,286*	*54*	*2,136*
	$1,000,011	$424,317	$2,580,304	$6,761,382	$418,834	$385,953	$829,552	$161,047	$1,376,552	$108,398	$335,912	$1,300,962	$152,144	$1,897,416

from 1918 to 1923

Country	1918	July 1 to Dec. 31 1918	1919	1920	1921	1922 Up to $800	1922 $800 to $2,000	1922 $2,000 & Over	Total 1922	1923 Up to $500	1923 $500 to $800	1923 $800 to $2,000	1923 Over $2,000	Total 1923
	3,399	*673*	*454*	*797*	*99*	*97*	*50*	*3*	*150*	*341*	*87*	*347*	*20*	*795*
Chile	$3,576,511	$1,009,964	$700,997	$992,539	$142,288	$36,736	$59,224	$11,316	$107,276	$109,026	$80,933	$399,801	$30,686	$620,446
	164	*30*	*253*	*962*	*122*	*104*	*60*	*8*	*172*	*189*	*47*	*169*	*9*	*414*
Colombia	$121,422	$27,542	$298,383	$1,247,976	$144,751	$45,060	$68,670	$23,511	$137,241	$66,440	$30,148	$196,330	$23,621	$316,539
	142	*22*	*84*	*201*	*28*	*15*	*10*	.....	*25*	*37*	*9*	*23*	*1*	*70*
Ecuador	$130,086	$29,471	$111,051	$288,884	$39,461	$8,084	$10,732	.....	$18,816	$13,542	$6,553	$28,677	$2,540	$51,312
	.....	.....	*4*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Falkland Is.	.....	.....	$5,788	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	180	*18*	*49*	*130*	*10*	*53*	*7*	.....	*60*	*79*	*8*	*8*	.....	*95*
British Guiana	$100,546	$18,471	$39,369	$92,665	$8,498	$24,145	$6,842	.....	$30,987	$28,140	$5,218	$8,075	.....	$41,433
	16	.....	*7*	*10*	*11*	*22*	*2*	.....	*24*	*13*	*2*	.....	.....	*15*
Dutch Guiana	$17,775	.....	$3,872	$12,706	$8,260	$10,297	$1,952	.....	$12,249	$5,247	$1,100	.....	.....	$6,347
	8	*1*	*3*	*3*	*1*	*4*	.....	.....	*4*	*2*	.....	.....	.....	*2*
French Guiana	$3,632	$318	$2,167	$5,264	$1,000	$1,932	.....	.....	$1,932	$738	.....	.....	.....	$738
	13	.....	*13*	*102*	*1*	*2*	.....	.....	*2*	.....	.....	.....	.....	.....
Paraguay	$5,025	.....	$5,780	$64,967	$1,200	$1,304	.....	.....	$1,304	.....	.....	.....	.....	.....
	784	*257*	*599*	*1,297*	*76*	*40*	*14*	*8*	*62*	*365*	*82*	*182*	*18*	*647*
Peru	$913,669	$395,753	$662,528	$1,249,546	$185,362	$19,803	$15,725	$34,085	$69,613	$134,296	$59,610	$188,207	$52,560	$434,673
	2,232	*418*	*1,844*	*4,090*	*164*	*602*	*122*	*17*	*741*	*2,373*	*322*	*380*	*53*	*3,128*
Uruguay	$1,177,463	$307,221	$1,757,623	$4,055,458	$297,382	$226,121	$139,345	$49,684	$415,150	$697,152	$197,344	$437,125	$166,901	$1,498,522
	160	*38*	*293*	*883*	*275*	*328*	*91*	*30*	*449*	*483*	*75*	*194*	*36*	*788*
Venezuela	$97,485	$56,021	$300,888	$821,490	$273,425	$145,627	$106,724	$91,839	$344,190	$185,876	$50,895	$208,952	$97,757	$543,480
Asia—	*8*	.....	*29*	*52*	*12*	*4*	*1*	.....	*5*	*4*	*3*	*2*	.....	*9*
Aden	$6,879	.....	$25,197	$50,387	$10,518	$2,550	$1,108	.....	$3,658	$2,000	$1,650	$2,065	.....	$5,715
	.....	.....	.....	.....	*12*	*35*	.....	.....	*35*	.....	.....	.....	.....	.....
Armenia, etc.	.....	.....	.....	.....	$4,519	$13,081	.....	.....	$13,081	.....	.....	.....	.....	.....
	73	*27*	*2,624*	*12,014*	*820*	*673*	*398*	*8*	*1,079*	*782*	*730*	*477*	*9*	*1,998*
British India	$53,428	$42,756	$2,891,943	$13,865,679	$909,609	$435,562	$409,997	$24,204	$869,763	$350,490	$486,471	$489,894	$22,398	$1,349,253
	.....	.....	.....	.....	.....	*119*	*33*	.....	*152*	*67*	*113*	*111*	*3*	*294*
Ceylon	.....	.....	.....	.....	.....	$74,092	$33,039	.....	$107,131	$30,357	$71,499	$116,595	$8,260	$226,711
	287	*49*	*499*	*2,334*	*105*	*93*	*71*	.....	*164*	*208*	*163*	*228*	*2*	*601*
Straits Settlements	$202,221	$53,934	$572,320	$2,638,794	$149,013	$57,861	$74,648	.....	$132,509	$98,022	$103,451	$230,506	$4,406	$436,385
	11	.....	*102*	*490*	*47*	.....	*1*	.....	*1*	.....	.....	.....	.....	.....
Other British East Indies	$17,740	.....	$114,609	$540,146	$46,251	.....	$1,445	.....	$1,445	.....	.....	.....	.....	.....
	833	*409*	*1,158*	*1,774*	*499*	*352*	*217*	*10*	*579*	*215*	*281*	*305*	*16*	*817*
China	$818,659	$402,275	$1,414,844	$2,356,699	$532,803	$217,585	$228,724	$25,612	$471,921	$79,589	$201,633	$345,127	$50,215	$676,564
	2	*3*	*11*	*595*	*4*	*7*	.....	.....	*7*	*34*	*4*	*5*	.....	*43*
Chosen	$1,300	$2,295	$9,272	$311,457	$1,871	$2,962	.....	.....	$2,962	$12,414	$2,650	$6,122	.....	$21,186
	.....	.....	.....	.....	.....	*120*	*250*	*9*	*379*	*187*	*388*	*665*	*5*	*1,245*
Java & Madura	.....	.....	.....	.....	.....	$85,808	$262,433	$26,748	$374,989	$86,408	$260,973	$693,605	$14,536	$1,055,522
	1,272	*1,078*	*1,820*	*4,765*	*675*	.....	*22*	.....	*22*	*4*	*16*	*65*	.....	*85*
Other Dutch East Indies	$1,302,800	$1,359,811	$2,369,241	$6,500,062	$1,061,059	.....	$22,027	.....	$22,027	$1,200	$11,179	$62,423	.....	$74,802
	.....	.....	.....	.....	.....	.....	.....	.....	.....	*1*	.....	.....	.....	*1*
Far East Republic	.....	.....	.....	.....	.....	.....	.....	.....	.....	$463	.....	.....	.....	$463
	18	*12*	*37*	*537*	*32*	*10*	*1*	.....	*11*	*19*	*17*	*5*	*1*	*42*
French Indo China	$21,175	$18,069	$43,918	$568,961	$40,258	$3,658	$919	.....	$4,577	$7,333	$13,010	$5,097	$4,128	$29,568
	.....	.....	.....	.....	*9*	*10*	.....	.....	*10*	.....	.....	.....	.....	.....
Greece	.....	.....	.....	.....	$6,502	$3,920	.....	.....	$3,920	.....	.....	.....	.....	.....
	.....	.....	.....	.....	*69*	*5*	*2*	.....	*7*	*99*	*1*	*6*	.....	*106*
Hejaz, Arabia & Iraq	.....	.....	.....	.....	$34,964	$3,888	$1,951	.....	$5,839	$33,217	$785	$5,301	.....	$39,303
	117	*86*	*144*	*214*	*76*	*11*	*36*	*12*	*59*	*62*	*12*	*116*	*8*	*198*
Hongkong	$91,228	$86,006	$188,121	$341,191	$125,143	$7,346	$36,636	$45,198	$89,180	$26,166	$7,781	$123,408	$24,287	$181,642
	2,139	*1,514*	*2,805*	*2,796*	*1,281*	*1,067*	*164*	*40*	*1,271*	*2,502*	*499*	*648*	*93*	*3,742*
Japan	$2,040,897	$1,608,516	$2,890,034	$2,983,137	$983,542	$455,629	$197,528	$130,134	$783,291	$794,932	$325,970	$718,825	$268,794	$2,108,521
	18	*38*	*36*	*62*	*6*	*82*	*3*	*1*	*86*	*44*	*8*	*2*	*1*	*55*
Kwantung	$12,338	$29,335	$28,995	$68,491	$19,807	$23,594	$2,940	$2,709	$29,243	$16,355	$4,726	$3,150	$2,600	$26,831
	.....	.....	.....	.....	*357*	*832*	*162*	*5*	*999*	*480*	*108*	*186*	*6*	*780*
Palestine & Syria	.....	.....	.....	.....	$160,343	$388,255	$176,962	$11,311	$576,528	$141,051	$77,970	$210,463	$14,921	$444,405
	2	*8*	*4*	*134*	*37*	*27*	.....	.....	*27*	*163*	*1*	.....	.....	*165*
Persia	$1,048	$4,625	$2,275	$76,718	$18,923	$9,830	.....	.....	$9,830	$46,444	$525	$879	.....	$47,848
	1,714	*603*	*2,381*	*3,452*	*467*	*349*	*176*	*25*	*550*	*577*	*320*	*514*	*32*	*1,443*
Philippine Is.	$1,373,204	$616,437	$2,629,348	$3,932,108	$476,483	$201,562	$188,949	$67,416	$457,927	$218,799	$231,713	$574,712	$88,964	$1,114,188
	5	*3*	*49*	*76*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Russia	$8,425	$11,734	$52,145	$124,235	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	65	*27*	*71*	*82*	*63*	*17*	*15*	*1*	*33*	*2*	*9*	*12*	.....	*23*
Siam	$60,220	$22,005	$70,210	$92,457	$73,498	$11,541	$15,528	$5,000	$32,069	$784	$6,681	$10,528	.....	$17,993
	.....	*6*	*119*	*1,214*	*377*	*16*	.....	.....	*16*	*9*	.....	*3*	.....	*12*
Turkey	.....	$3,965	$116,347	$930,661	$277,746	$6,275	.....	.....	$6,275	$2,927	.....	$2,573	.....	$5,500
Oceania—	*4,307*	*1,582*	*3,905*	*8,882*	*3,020*	*6,674*	*4,414*	*148*	*11,236*	*6,375*	*8,835*	*10,251*	*356*	*25,817*
Australia	$3,410,557	$1,492,899	$4,016,751	$9,936,869	$3,065,909	$3,658,137	$4,664,636	$394,157	$8,716,930	$2,564,756	$5,814,281	$10,771,042	$863,392	$20,013,471
	1,818	*639*	*2,959*	*6,671*	*691*	*1,030*	*798*	*12*	*1,840*	*679*	*1,234*	*2,287*	*69*	*4,269*
New Zealand	$1,453,311	$607,807	$3,314,891	$8,190,277	$875,552	$686,887	$832,268	$32,122	$1,551,277	$298,380	$862,920	$2,399,223	$184,682	$3,745,205
	30	*7*	*23*	*32*	*11*	*9*	.....	.....	*9*	.....	*18*	*2*	.....	*20*
Other British Oceania	$20,863	$5,955	$17,264	$34,670	$11,018	$4,821	.....	.....	$4,821	.....	$13,331	$2,912	.....	$16,243
	12	*3*	*11*	*13*	*10*	*11*	*4*	.....	*15*	*8*	*5*	*1*	.....	*14*
French Oceania	$7,612	$3,368	$11,118	$14,255	$10,643	$4,533	$4,960	.....	$9,493	$2,650	$3,065	$1,122	.....	$6,837
	18	*7*	*8*	*22*	*14*	*19*	.....	.....	*19*	*2*	*1*	*1*	.....	*4*
Other Oceania	$11,029	$4,935	$6,285	$16,165	$10,245	$11,199	.....	.....	$11,199	$900	$650	$1,095	.....	$2,645
Africa—	.....	.....	.....	*5*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Abyssinia	.....	.....	.....	$2,416	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	*24*	*15*	*68*	.....	.....	*68*	*44*	*2*	.....	.....	*46*
Belgian Congo	.....	.....	.....	$16,325	$9,198	$24,732	.....	.....	$24,732	$16,628	$1,050	.....	.....	$17,678
	202	*43*	*357*	*753*	*73*	*66*	*59*	*5*	*130*	*42*	*81*	*78*	.....	*201*
British W. Africa	$115,772	$37,351	$393,405	$913,814	$77,890	$41,166	$66,506	$12,702	$120,374	$17,636	$54,787	$77,206	.....	$149,629
	2,142	*541*	*3,019*	*6,688*	*596*	*681*	*1,343*	*19*	*2,043*	*607*	*1,170*	*3,054*	*22*	*4,853*
British S. Africa	$1,706,136	$530,951	$3,462,330	$7,795,194	$687,738	$483,076	$1,331,544	$54,935	$1,869,555	$270,956	$835,247	$2,995,165	$57,672	$4,159,040
	112	*14*	*82*	*373*	*112*	*60*	*33*	.....	*93*	*106*	*19*	*88*	.....	*213*
British E. Africa	$75,778	$14,445	$80,954	$432,819	$133,866	$35,973	$34,486	.....	$70,459	$46,073	$11,859	$87,572	.....	$145,504
	15	.....	*6*	*150*	*67*	*51*	*54*	*1*	*106*	*59*	*30*	*82*	*1*	*172*
Canary Is.	$5,378	.....	$10,162	$196,216	$55,077	$25,794	$64,123	$2,400	$92,317	$26,525	$19,105	$92,751	$2,466	$140,847
	21	*6*	*230*	*1,558*	*212*	*349*	*25*	.....	*374*	*120*	*52*	*44*	*3*	*219*
Egypt	$17,300	$20,850	$165,244	$1,553,898	$135,365	$150,970	$28,911	.....	$179,881	$49,710	$33,598	$41,119	$8,738	$133,165
	.....	.....	.....	.....	.....	*45*	.....	.....	*45*	*80*	*3*	.....	*1*	*84*
Algeria and Tunis	.....	.....	.....	.....	.....	$17,368	.....	.....	$17,368	$26,101	$1,650	.....	$3,400	$31,151
	121	*89*	*198*	*369*	*94*	*50*	.....	.....	*50*	*105*	*10*	*6*	.....	*121*
Other French Africa	$50,550	$52,757	$144,023	$301,720	$69,718	$21,092	.....	.....	$21,092	$35,627	$7,393	$6,072	.....	$49,092
	.....	.....	.....	*5*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Italian Africa	.....	.....	.....	$3,075	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	*7*	*44*	*5*	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kamerun	.....	.....	$3,721	$27,976	$2,890	.....	.....	.....	.....	.....	.....	.....	.....	.....
	12	.....	.....	*1*	.....	*1*	.....	.....	*1*	.....	.....	.....	.....	.....
Liberia	$4,220	.....	.....	$1,205	.....	$685	.....	.....	$685	.....	.....	.....	.....	.....
	2	.....	.....	*3*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Madagascar	$1,659	.....	.....	$3,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	35	.....	*237*	*364*	*80*	*119*	*9*	.....	*128*	*105*	*23*	*4*	*1*	*133*
Morocco	$17,718	.....	$162,016	$340,490	$61,485	$53,313	$9,427	.....	$62,740	$39,893	$16,327	$3,248	$2,466	$61,934
	.....	.....	.....	.....	.....	*11*	*11*	.....	*22*	*19*	*8*	*15*	.....	*42*
Portuguese East Africa	.....	.....	.....	.....	.....	$7,153	$9,778	.....	$16,931	$7,910	$5,914	$16,085	.....	$29,909
	9	*12*	*18*	*244*	*31*	*73*	*3*	.....	*76*	*35*	*17*	*12*	.....	*64*
Other Portuguese Africa	$9,673	$8,598	$16,636	$282,203	$23,562	$33,167	$2,789	.....	$35,956	$13,828	$12,666	$11,732	.....	$38,226
	.....	.....	.....	.....	*2*	*10*	*9*	*1*	*20*	*6*	*4*	*8*	.....	*18*
Spanish Africa	.....	.....	.....	.....	$6,950	$7,518	$11,250	$2,692	$21,460	$2,922	$2,872	$10,462	.....	$16,256
Totals	*52,312*	*14,345*	*67,145*	*142,508*	*30,950*	*42,234*	*22,532*	*2,025*	*66,791*	*52,536*	*29,708*	*41,998*	*2,801*	*127,043*
	$45,331,366	$15,698,106	$73,700,527	165,255,921	$32,533,725	$20,505,256	$24,621,341	$5,923,219	$51,049,816	$18,605,217	$19,703,247	$44,591,387	$7,796,421	$90,696,272

American Truck Exports

Country	1918	July-Dec. 1918	1919	1920	1921	1922			Total 1922	1923			Total 1923
						Up to 1 Ton	1 to 2½ Tons	Over 2½ Tons		Up to 1 Ton	1 to 2½ Tons	Over 2½ Tons	
Austria (Prior to 1920 A. Hungary)	.....	.....	*10*	*3*	*1*	*2*	.....	.....	*2*	*1*	.....	.....	*1*
	.....	.....	$18,500	$1,348	$520	$768	.....	.....	$768	$531	.....	.....	$531
Azores & Madeira Isl.	.....	.....	*3*	*1*	*3*	*7*	.....	.....	*7*	*8*	.....	.....	*8*
	.....	.....	$3,816	$3,650	$1,369	$2,968	.....	.....	$2,968	$3,450	.....	.....	$3,450
Belgium	.....	.....	*138*	*195*	*169*	*2,820*	*4*	.....	*2,824*	*3,955*	*2*	.....	*3,957*
	.....	.....	$307,778	$209,985	$77,756	$728,947	$6,703	.....	$735,650	$954,277	$2,068	.....	$956,345
Bulgaria	.....	.....	.....	*4*		.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	$9,723	.....	.....	.....	.....	.....	.....	.....	.....	.....
Czechoslovakia	.....	.....	.....	.....	.....	*5*	.....	.....	*5*	.....	.....	.....	.....
	.....	.....	.....	.....	.....	$2,122	.....	.....	$2,122	.....	.....	.....	.....
Denmark	*2*	.....	*643*	*296*	*18*	*20*	*5*	*1*	*26*	*14*	*34*	.....	*48*
	$3,800	.....	$1,339,380	$615,448	$33,375	$6,182	$7,253	$2,224	$15,659	$7,434	$34,089	.....	$41,523
Esthonia	.....	.....	.....	.....	.....	.....	*1*	.....	*1*	*82*	*1*	.....	*83*
	.....	.....	.....	.....	.....	.....	$1,315	.....	$1,315	$21,229	$1,700	.....	$22,929
Finland	.....	.....	*10*	*104*	*6*	*32*	*1*	.....	*33*	*353*	*1*	.....	*354*
	.....	.....	$12,783	$212,594	$6,000	$10,245	$3,200	.....	$13,445	$93,390	$1,275	.....	$94,665
France	*2,754*	*2,025*	*3,521*	*135*	*10*	*4*	*7*	*4*	*15*	*16*	*1*	*2*	*19*
	$10,001,626	$8,011,335	$15,143,226	$434,943	$14,991	$1,369	$12,046	$4,983	$18,398	$11,557	$1,426	$4,583	$17,566
Germany	.....	.....	.....	*47*	*1*	*3*	*21*	.....	*24*	*1*	.....	*2*	*3*
	.....	.....	.....	$41,958	$535	$1,213	$50,675	.....	$51,888	$425	.....	$5,000	$5,425
Gibraltar	*27*	.....	.....	*3*		.....	.....	.....	.....	*4*	.....	.....	*4*
	$58,325	.....	.....	$4,756	.....	.....	.....	.....	.....	$1,680	.....	.....	$1,680
Greece	*14*	.....	*37*	*71*	*26*	*8*	.....	.....	*8*	*1*	.....	.....	*1*
	$32,000	.....	$80,891	$110,773	$28,846	$3,232	.....	.....	$3,232	$393	.....	.....	$393
Hungary	.....	.....	.....	*1*		*1*	.....	.....	*1*	.....	.....	.....	.....
	.....	.....	.....	$3,164	.....	$389	.....	.....	$389	.....	.....	.....	.....
Iceland & Faroe Isl.	*1*	.....	*26*	*38*	.....	.....	.....	.....	.....	.....	.....	.....	.....
	$2,245	.....	$21,661	$22,321	.....	.....	.....	.....	.....	.....	.....	.....	.....
Italy	*52*	*26*	*7*	*37*	*2*	*32*	.....	.....	*32*	*509*	.....	.....	*509*
	$28,055	$87,577	$24,310	$67,775	$899	$7,212	.....	.....	$7,212	$144,167	.....	.....	$144,167
Latvia	.....	.....	.....	.....	.....	*1*	.....	*7*	*8*	*35*	*1*	*1*	*37*
	.....	.....	.....	.....	.....	$425	.....	$20,800	$21,225	$9,289	$1,750	$2,325	$13,364
Malta, Gozo & Cyprus	.....	.....	.....	*9*	*4*	*4*	*1*	.....	*5*	*11*	.....	.....	*11*
	.....	.....	.....	$11,557	$1,666	$1,536	$1,200	.....	$2,736	$3,466	.....	.....	$3,466
Netherlands	.....	.....	*122*	*528*	*300*	*78*	*7*	*4*	*89*	*32*	*3*	.....	*35*
	.....	.....	$294,772	$593,491	$207,932	$36,039	$10,439	$4,880	$51,358	$14,643	$3,106	.....	$17,749
Norway	*40*	*83*	*815*	*829*	*20*	*207*	*22*	.....	*229*	*548*	*30*	*8*	*586*
	$133,227	$212,574	$1,787,473	$1,434,715	$28,461	$63,716	$21,985	.....	$85,701	$154,919	$42,606	$12,298	$209,823
Poland & Danzig	.....	.....	.....	*22*	*28*	*1*	.....	.....	*1*	*2*	.....	.....	*2*
	.....	.....	.....	$35,473	$61,368	$650	.....	.....	$650	$1,083	.....	.....	$1,083
Portugal	*12*	*10*	*30*	*156*	*1*	*3*	.....	.....	*3*	*9*	.....	.....	*9*
	$36,914	$42,300	$76,728	$284,197	$3,650	$1,404	.....	.....	$1,404	$3,808	.....	.....	$3,808
Rumania	.....	.....	*114*	*75*	*15*	*1*	*2*	.....	*3*	.....	.....	.....	.....
	.....	.....	$94,951	$89,370	$25,102	$404	$3,766	.....	$4,170	.....	.....	.....	.....
Russia	*406*	.....	*2*	*104*	*32*	*67*	*2*	.....	*69*	*58*	.....	*1*	*59*
	$1,562,303	.....	$2,503	$59,535	$25,100	$32,362	$900	.....	$33,262	$25,585	.....	$4,441	$30,026
Spain	*46*	*33*	*209*	*567*	*27*	*776*	*8*	*2*	*786*	*1,078*	*32*	*7*	*1,117*
	$97,910	$87,180	$409,493	$1,004,833	$49,592	$193,622	$9,561	$4,133	$207,316	$253,213	$30,114	$7,146	$290,473
Sweden	*7*	.....	*211*	*821*	*64*	*366*	*20*	*1*	*387*	*1,628*	*117*	*31*	*1,776*
	$10,360	.....	$444,695	$1,416,124	$133,690	$105,641	$25,155	$2,192	$132,988	$482,517	$117,791	$63,475	$663,783
Switzerland	.....	.....	*33*	*78*	*7*	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	$40,044	$49,767	$14,677	.....	.....	.....	.....	.....	.....	.....	.....
Turkey	.....	.....	*82*	*120*	*5*	*14*	*2*	.....	*16*	.....	.....	.....	.....
	.....	.....	$118,005	$165,400	$16,715	$4,926	$6,770	.....	$11,696	.....	.....	.....	.....
Ukraine	.....	.....	.....	.....	*1*	*2*	*5*	.....	*7*	*61*	.....	.....	*61*
	.....	.....	.....	.....	$600	$1,500	$17,000	.....	$18,500	$22,723	.....	.....	$22,723
England	*4,805*	*830*	*890*	*4,995*	*272*	*80*	*286*	*12*	*378*	*605*	*432*	*35*	*1,072*
	$13,438,981	$2,456,993	$1,342,575	$7,148,880	$423,020	$67,251	$291,080	$16,630	$374,961	$271,219	$406,550	$44,080	$721,849
Scotland	*447*	.....	*2*	*162*	*5*	*2*	*2*	.....	*4*	.....	.....	.....	.....
	$1,203,328	.....	$1,779	$183,955	$7,290	$2,080	$4,000	.....	$6,080	.....	.....	.....	.....
Ireland	.....	*2*	*15*	*45*	.....	*1*	.....	.....	*1*	*1*	*1*	.....	*2*
	.....	$4,276	$19,948	$40,555	.....	$506	.....	.....	$506	$520	$795	.....	$1,315
Yugoslavia, Albania & Fiume	.....	.....	*4*	*3*	*2*	*1*	.....	.....	*1*	*1*	.....	.....	*1*
	.....	.....	$5,700	$1,511	$1,430	$414	.....	.....	$414	$1,200	.....	.....	$1,200
British Honduras	*2*	*1*	.....	*20*	*2*	*1*	.....	.....	*1*	*1*	.....	.....	*1*
	$3,700	$834	.....	$14,442	$709	$354	.....	.....	$354	$687	.....	.....	$687
Canada	*1,108*	*895*	*1,858*	*2,149*	*1,146*	*362*	*622*	*273*	*1,257*	*313*	*876*	*169*	*1,358*
	$1,381,542	$1,192,833	$2,896,325	$4,187,597	$1,798,855	$271,399	$819,341	$779,989	$1,870,729	$216,302	$1,166,672	$522,608	$1,905,582
Costa Rica	*5*	.....	*1*	*14*	*13*	*3*	*3*	.....	*6*	*3*	*4*	.....	*7*
	$10,245	.....	$504	$22,553	$24,920	$1,246	$3,512	.....	$4,758	$1,224	$6,156	.....	$7,380
Guatemala	*3*	.....	*10*	*25*	*7*	*2*	*4*	.....	*6*	*6*	*3*	.....	*9*
	$5,512	.....	$16,761	$38,105	$5,920	$2,600	$5,074	.....	$7,674	$2,358	$2,874	.....	$5,232
Honduras	*6*	.....	*7*	*19*	*6*	*5*	*4*	*2*	*11*	*15*	*1*	*3*	*19*
	$3,373	.....	$9,589	$20,770	$15,555	$1,795	$7,407	$7,600	$16,802	$6,798	$1,801	$14,345	$22,944
Nicaragua	*1*	*2*	*11*	*23*	*5*	*1*	.....	.....	*1*	.....	.....	.....	.....
	$2,509	$5,742	$16,026	$32,253	$14,200	$1,400	.....	.....	$1,400	.....	.....	.....	.....
Panama	*47*	*16*	*38*	*68*	*71*	*26*	.....	.....	*26*	*66*	*9*	*2*	*77*
	$47,859	$20,504	$39,148	$56,127	$98,790	$10,240	.....	.....	$10,240	$23,312	$17,779	$9,386	$50,477
Salvador	*4*	*1*	*4*	*42*	*1*	.....	*1*	.....	*1*	*1*	.....	*2*	*3*
	$14,811	$175	$8,897	$118,585	$3,166	.....	$3,220	.....	$3,220	$727	.....	$11,513	$12,240
Mexico	*365*	*201*	*938*	*1,281*	*1,482*	*807*	*139*	*37*	*983*	*780*	*178*	*55*	*1,013*
	$525,664	$260,968	$1,205,664	$1,973,994	$1,554,554	$339,156	$177,816	$100,113	$617,085	$354,151	$184,223	$123,841	$662,215
Miquelon, Langley, Etc.	.....	.....	*6*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	$6,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newfoundland & Labrador	*2*	*5*	*10*	*12*	*3*	.....	.....	.....	.....	*4*	.....	.....	*4*
	$7,250	$2,997	$23,306	$54,907	$6,275	.....	.....	.....	.....	$1,750	.....	.....	$1,750
Barbados	*2*	*5*	*15*	*58*	*3*	*7*	*3*	.....	*10*	*13*	*3*	*1*	*17*
	$3,400	$11,792	$14,394	$52,148	$1,800	$9,733	$5,438	.....	$15,171	$4,725	$5,462	$500	$10,687
Jamaica	*10*	*2*	*36*	*215*	*43*	*98*	*15*	.....	*113*	*170*	*48*	*1*	*219*
	$6,775	$800	$42,828	$313,578	$51,469	$41,689	$21,996	.....	$63,685	$62,795	$69,529	$2,705	$135,029
Trinidad & Tobago	*14*	*7*	*69*	*202*	*70*	*37*	*6*	.....	*43*	*34*	*2*	*1*	*37*
	$18,361	$15,089	$86,479	$271,451	$66,201	$16,562	$9,025	.....	$25,587	$12,351	$3,005	$3,271	$18,627
Other British West Indies	*28*	*4*	*25*	*56*	*22*	*59*	*5*	*9*	*73*	*47*	.....	.....	*47*
	$89,914	$3,304	$14,301	$38,168	$17,626	$23,879	$8,246	$42,281	$74,406	$17,425	.....	.....	$17,425
Cuba	*554*	*279*	*915*	*1,953*	*283*	*252*	*47*	*4*	*303*	*743*	*52*	*16*	*811*
	$1,130,982	$539,070	$1,955,509	$4,937,281	$366,710	$81,835	$49,536	$12,036	$143,407	$215,467	$77,344	$52,133	$344,944
Dominican Republic	*21*	*8*	*48*	*213*	*18*	*18*	*8*	*2*	*28*	*26*	*5*	*9*	*40*
	$13,323	$11,597	$75,953	$226,982	$52,473	$7,592	$16,491	$3,966	$28,049	$11,120	$7,845	$24,002	$42,967
Dutch West Indies	.....	.....	*3*	*18*	*6*	*6*	*1*	*1*	*8*	*17*	*1*	.....	*18*
	.....	.....	$3,095	$8,542	$3,720	$2,467	$2,000	$3,500	$7,967	$5,999	$100	.....	$6,099
French West Indies	*26*	*2*	*58*	*71*	*13*	*1*	.....	.....	*1*	*1*	.....	.....	*1*
	$49,626	$3,650	$77,085	$55,607	$7,940	$364	.....	.....	$364	$364	.....	.....	$364
Haiti	*11*	*2*	*8*	*27*	*14*	*5*	*5*	.....	*10*	*8*	*13*	*2*	*23*
	$10,578	$1,200	$6,798	$51,358	$6,281	$2,040	$7,859	.....	$9,899	$3,942	$26,152	$4,465	$34,559
Virgin Is.	*2*	.....	*1*	*8*	*7*	*4*	.....	.....	*4*	*1*	.....	.....	*1*
	$2,845	.....	$3,350	$16,789	$5,701	$1,553	.....	.....	$1,553	$500	.....	.....	$500
Argentina	*51*	*3*	*145*	*352*	*24*	*20*	*20*	*9*	*58*	*95*	*63*	*30*	*188*
	$50,124	$4,094	$291,430	$825,333	$70,111	$14,168	$31,004	$23,008	$68,180	$93,765	$100,926	$84,144	$278,835
Bolivia	*14*	*12*	*8*	*13*	.....	*7*	.....	.....	*7*	*2*	.....	.....	*2*
	$24,958	$38,716	$12,376	$21,895	.....	$2,812	.....	.....	$2,812	$324	.....	.....	$324

from 1918 to 1923

Country	1918	July-Dec. 1918	1919	1920	1921	1922			Total 1922	1923			Total 1923
						Up to 1 Ton	1 to 2½ Tons	Over 2½ Tons		Up to 1 Ton	1 to 2½ Tons	Over 2½ Tons	
Brazil	*24* $31,133	*21* $19,167	*200* $199,738	*1,540* $1,191,577	*103* $354,810	*41* $10,349	*2* $1,888	*22* $71,530	*65* $83,767	*27* $7,021	.....	.....	*27* $7,021
Chile	*220* $282,638	*85* $136,376	*88* $131,055	*299* $326,216	*45* $64,636	*105* $48,809	*7* $9,659	*1* $3,342	*113* $61,810	*515* $261,028	*44* $60,426	*8* $21,625	*567* $343,079
Colombia	*3* $7,100	*2* $3,285	*38* $39,341	*275* $291,410	*35* $66,440	*21* $13,238	*8* $13,493	*9* $33,842	*38* $60,573	*85* $30,522	*30* $42,107	*23* $95,815	*138* $168,444
Ecuador	*3* $6,876	*4* $6,520	*5* $6,865	*46* $85,895	*20* $41,982	*8* $6,838	.....	*2* $7,428	*10* $14,266	*42* $14,808	*2* $2,487	.....	*44* $17,295
Falkland Islands	.....	.....	.....	.....	*1*	.....	.....	.....	.....	*1*	.....	.....	*1*
British Guiana	*7* $5,100	*1* $2,600	*35* $24,119	*123* $72,966	*5* $7,686	*1* $358	.....	.....	*1* $358	.....	*1* $1,047	.....	*1* $1,047
Dutch Guiana	.....	*1* $1,000	*1* $506	*6* $4,111	.....	*5* $2,089	.....	.....	*5* $2,089	.....	.....	.....	.....
French Guiana	.....	.....	*4* $2,061	*1* $3,061	.....	*1* $404	.....	.....	*1* $404	*3* $1,033	.....	.....	*3* $1,033
Peru	*73* $155,834	*52* $139,295	*207* $215,175	*900* $775,398	*52* $89,401	*70* $29,627	*8* $7,683	*2* $9,800	*80* $47,110	*364* $143,071	*43* $74,320	*5* $22,528	*412* $239,919
Uruguay	*16* $15,809	*2* $2,000	*68* $79,196	*113* $113,479	*81* $34,713	*138* $37,357	*17* $11,151	*1* $4,805	*156* $53,313	*574* $165,261	*4* $4,711	*2* $5,275	*580* $175,247
Venezuela	*16* $12,410	*2* $2,200	*41* $24,579	*186* $144,308	*13* $18,911	*24* $10,514	*8* $15,084	.....	*32* $25,598	*151* $56,403	*6* $16,302	*10* $47,726	*167* $120,431
Aden	.....	.....	*1*	*2*	.....	.....	*1*	.....	*1*	.....	.....	.....	.....
Armenian Kurdistan	.....	.....	$922	$7,188	.....	.....	$1,400	.....	$1,400	.....	.....	.....	.....
British India	*11* $20,275	*1* $2,118	*260* $563,339	*1,612* $3,262,328	*132* $269,760	*4* $2,803 *22* $20,969	.....	.....	*4* $2,803 *106* $129,445	*72* $61,733	*97* $106,233	*20* $28,778	*189* $196,744
Ceylon	.....	.....	.....	.....	.....	*1* $1,213	*5* $8,230	*5* $15,631	*11* $25,074	*23* $26,060	*39* $55,635	*1* $1,182	*63* $82,877
Straits Settlements	*70* $113,554	*44* $64,425	*115* $229,624	*447* $857,410	*63* $158,487	.....	.....	.....	.....	.....	*4* $8,653	*1* $2,665	*5* $11,318
Other British East Indies	*3* $7,138	.....	*16* $27,700	*69* $152,849	*4* $4,192	.....	.....	.....	.....	.....	.....	.....	.....
China	*23* $26,236	*31* $46,595	*273* $596,715	*261* $464,785	*71* $105,485	*32* $16,154	*29* $30,325	*1* $1,516	*62* $47,995	*172* $63,394	*12* $12,577	*4* $27,950	*188* $103,921
Chosen	*2* $1,629	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Java & Madura	.....	.....	.....	.....	.....	.....	*1*	*1*	*2*	.....	*5*	*1*	*6*
Other Dutch East Indies	*68* $162,749	*139* $313,725	*324* $689,225	*1,182* $2,920,663	*368* $922,997	.....	$3,925 *7*	$3,220	$7,145 *7*	.....	$5,664 *5*	$3,000	$8,664 *5*
French Indo China	*2* $3,500	*3* $7,290	*16* $11,556	*141* $117,984	*8* $7,522	.....	$5,761 *1*	.....	$3,761 *1*	*9*	$4,592	.....	$4,592 *9*
Greece	.....	.....	.....	.....	*2*	.....	$1,080	.....	$1,080	$3,759	.....	.....	$3,759
Hejaz, Arabia & Iraq	.....	.....	.....	.....	$734 *14*	.....	.....	.....	.....	.....	.....	.....	.....
Hongkong	*8* $5,371	*8* $10,500	*19* $25,547	*26* $55,377	$10,663 *29* $80,450	*3* $8,660	*6* $10,516	*3* $5,500	*12* $22,676	*53* $24,816	*9* $13,153	*1* $10,000	*63* $47,969
Japan	*279* $317,787	*381* $636,692	*1,143* $1,736,439	*1,233* $1,590,760	*756* $634,867	*724* $318,176	*190* $245,845	*87* $347,275	*1,001* $911,296	*4,124* $1,499,218	*641* $727,898	*336* $866,249	*5,101* $3,093,365
Kwantung	.....	.....	*4*	*1*	*13*	.....	*5*	*1*	*6*	*32*	*6*	.....	*38*
Palestine & Syria	.....	.....	$6,335	$1,763	$26,435 *12*	*43*	$1,820 *9*	$2,400	$4,220 *52*	$11,800 *16*	$2,184 *2*	.....	$13,984 *18*
Persia	*4* $2,712	.....	.....	*20* $10,601	$12,694	$22,403	$14,651	.....	$37,054	$5,696 *1*	$2,156	.....	$7,852 *1*
Philippine Islands	*163* $215,106	*32* $56,815	*516* $798,540	*1,155* $1,818,221	*234* $221,650	*13* $8,450	*10* $13,387	*6* $9,455	*29* $31,292	$362 *325* $137,369	*20* $28,967	*1* $2,000	$362 *346* $168,336
Russia	.....	*15* $18,200	*21* $41,482	*9* $18,491	.....	.....	.....	.....	.....	.....	.....	.....	.....
Siam	*6* $4,535	*2* $4,867	*8* $12,411	*5* $8,965	.....	*1* $1,400	.....	*3* $6,488	*4* $7,888	.....	.....	.....	.....
Turkey	.....	.....	*14* $27,695	*93* $126,775	*41* $62,627	.....	.....	.....	.....	.....	.....	.....	.....
Australia	*109* $163,405	*15* $26,274	*418* $565,406	*986* $1,439,774	*720* $1,194,900	*350* $349,782	*595* $672,940	*114* $188,477	*1,059* $1,211,199	*892* $744,560	*927* $1,224,545	*227* $442,730	*2,046* $2,411,835
New Zealand	*74* $145,764	*52* $59,690	*225* $501,488	*522* $1,156,310	*161* $341,449	*43* $56,781	*109* $169,328	*39* $105,091	*191* $331,200	*148* $164,285	*233* $342,528	*65* $162,547	*446* $669,360
Other British Oceania	*2* $2,404	.....	*9* $9,779	*6* $6,250	*1* $2,168	.....	.....	.....	.....	*3* $2,327	.....	.....	*3* $2,327
French Oceania	*5* $6,480	*1* $1,000	*1* $600	*4* $9,858	.....	*1* $590	.....	.....	*1* $590	*4* $801	*1* $2,350	*2* $6,000	*7* $9,151
Other Oceania	*4* $5,518	*2* $2,213	*8* $7,020	*9* $4,706	*1* $500	.....	.....	.....	.....	.....	.....	.....	.....
Belgian Kongo	.....	.....	*3* $3,196	*13* $8,470	*35* $20,435	*82* $29,760	.....	.....	*82* $29,760	*83* $29,592	.....	.....	*83* $29,592
British West Africa	*27* $20,136	*13* $15,097	*215* $254,836	*780* $1,137,335	*33* $49,109	*61* $50,493	*44* $50,983	.....	*105* $101,476	*267* $229,780	*92* $96,913	.....	*359* $326,693
British South Africa	*70* $107,085	*23* $26,750	*57* $102,992	*244* $425,129	*58* $104,544	*25* $23,966	*25* $35,860	*27* $69,572	*77* $129,398	*68* $59,546	*33* $43,345	*2* $5,980	*103* $108,871
British East Africa	*1* $787	.....	*6* $5,010	*8* $17,338	*2* $6,000	.....	.....	.....	.....	*3* $1,852	*1* $2,000	.....	*4* $3,852
Canary Islands	.....	.....	*5* $4,312	*11* $32,311	*18* $16,539	*37* $17,848	*6* $8,582	*3* $4,264	*46* $30,694	*35* $16,822	*4* $4,711	*7* $11,367	*46* $32,900
Egypt	.....	.....	*15* $13,285	*74* $69,492	*44* $40,367	*27* $11,571	.....	.....	*27* $11,571	*2* $924	.....	.....	*2* $924
Algeria and Tunis	.....	.....	.....	.....	.....	*8* $2,913	.....	.....	*8* $2,913	*5* $1,904	.....	.....	*5* $1,904
Other French Africa	*18* $12,963	*11* $9,217	*44* $47,157	*339* $355,125	*11* $5,632	*12* $5,897	.....	.....	*12* $5,897	*30* $10,638	*1* $1,027	.....	*31* $11,665
Italian Africa	.....	.....	.....	*5* $11,500	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kamerun	.....	.....	*7* $3,544	*21* $20,736	*5* $1,944	.....	.....	.....	.....	.....	.....	.....	.....
Liberia	.....	.....	.....	*2* $1,156	.....	*1* $500	.....	.....	*1* $500	*1* $450	.....	.....	*1* $450
Morocco	.....	.....	*13* $13,410	*44* $24,376	*20* $9,075	*6* $2,424	*1* $650	.....	*7* $3,074	*18* $7,344	.....	.....	*18* $7,344
Portuguese East Africa	.....	.....	.....	.....	.....	*1* $800	.....	.....	*1* $800	*6* $3,229	*23* $30,400	.....	*29* $33,629
Other Portuguese Africa	.....	*4* $7,725	*4* $3,408	*34* $34,950	*11* $7,984	*111* $45,784	.....	.....	*111* $45,784	*38* $14,320	*7* $2,100	.....	*45* $16,420
Spanish Africa	.....	.....	.....	*1* $2,118	.....	.....	*1* $1,080	.....	*1* $1,080	.....	*1* $1,034	.....	*1* $1,034
Totals	*12 200* $31,874,459	*5 401* $14,637,236	*15,585* $35,425,437	*29,136* $46,775,781	*7 490* $10,335,893	*8,290* $3,266,927	*2 450* $3,076,811	*703* $1,926,970	*11 443* $8,270,708	*19,551* $7,320,972	*4,206* $5,233,203	*1 094* $2,759,678	*24,851* $15,313,853

Exports of Automotive Parts, 1912-1923 (Exclusive of Engines and Tires)

	1912	1913	1914	1915	1916	1917	1918	July-December 1918	1919	1920	1921	1922	1923
Europe:													
Austria (Prior to 1920 A. Hungary)	$2,195	$4,572	$5,198	$1,045	.....	.....	.....	.....	$825	$363	$2,931	$1,538	$3,441
Azores and Madeira Islands	99	720	1,384	1,800	$1,532	$1,270	$198	$1,600	1,909	4,555	4,173	4,039	3,061
Belgium	13,614	4,897	20,978	446	.....	.....	906	.....	141,974	334,422	145,056	404,518	1,974,876
Bulgaria	823	40	390	.....	.....	.....	.....	.....	307	1,399	901	1,328	418
Czechoslovakia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	182	5,620	2,372
Denmark	2,996	6,646	8,664	13,710	31,886	53,917	6,048	5,296	472,376	3,111,296	1,842,018	2,022,712	4,345,824
Esthonia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	589	3,062
Finland	1,104	1,799	2,931	1,178	5,627	55	.....	.....	12,137	24,787	22,154	4,206	14,523
France	85,537	165,950	179,351	480,764	2,216,823	3,700,812	3,999,904	3,158,628	1,966,719	3,980,079	1,099,683	2,141,907	3,885,639
Germany	80,036	113,602	213,351	13,770	.....	.....	.....	.....	.....	4,972	20,917	15,784	11,492
Gibraltar	100	.....	514	229	617	525	61	.....	834	6,033	7,559	4,237	3,899
Greece	454	379	807	2,010	24,724	12,604	4,675	13,415	102,715	114,275	80,340	46,565	38,886
Hungary	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	300	467	468
Iceland and Faroe Islands	.....	17	180	880	456	2,608	2,757	3,385	13,661	11,903	15,085	4,019	2,047
Italy	6,304	14,156	50,580	65,521	115,260	180,977	99,947	26,195	100,078	372,288	143,161	76,640	396,741
Latvia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	330	4,486	3,213
Lithuania	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	276	252
Malta, Gozo & Cyprus Islands	.....	.....	.....	.....	.....	54	.....	.....	136	6,822	9,718	9,528	5,341
Netherlands	6,440	14,135	7,634	3,055	41,525	96,200	3,625	.....	286,540	457,966	203,377	95,975	257,107
Norway	934	1,636	1,893	15,607	59,769	109,542	18,855	65,253	385,508	515,795	200,547	111,129	237,351
Poland and Danzig	.....	.....	.....	.....	.....	.....	.....	.....	.....	28,359	50,524	1,736	75,866
Portugal	865	920	2,357	3,239	45,356	66,929	20,274	11,770	58,031	176,367	36,189	30,225	37,996
Rumania	2,734	1,003	887	.....	391	.....	.....	.....	85,087	44,061	42,774	17,437	20,018
Russia	1,743	9,566	14,079	123,667	2,498,879	1,624,431	328,633	177	510	13,733	2,690	28,518	23,639
Spain	3,755	3,192	6,266	7,347	32,743	95,720	154,850	52,848	227,977	3,238,719	799,893	1,337,251	2,942,733
Sweden	3,789	4,276	6,140	4,211	37,917	26,891	4,032	.....	64,535	472,007	218,718	205,018	420,438
Switzerland	.....	457	1,069	400	1,150	565	54	.....	28,177	119,692	53,074	26,288	33,791
Turkey	964	116	.....	267	.....	.....	.....	.....	83,178	103,977	39,741	30,929	9,253
Ukraine	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,175	6,891
England	931,909	922,866	1,282,388	3,282,973	7,202,475	6,121,211	6,329,114	3,328,599	6,369,838	22,455,836	7,417,488	3,630,485	4,622,801
Scotland	874	1,485	23,269	29,403	52,414	22,146	955	154,686	53,060	114,007	14,705	6,616	15,073
Ireland	523	451	250	208	7,181	1,264	.....	.....	16,481	62,356	53,423	89,677	575,431
Yugoslavia, Albania & Fiume	113	.....	.....	.....	4,932	.....	.....	.....	350	808	10,184	13,024	8,004
North and South America:													
British Honduras	165	509	163	684	548	1,379	2,638	1,839	6,183	10,090	3,723	3,541	3,185
Canada	2,392,592	3,104,097	3,663,879	2,741,178	7,492,639	9,148,110	12,054,824	5,677,029	16,865,619	22,814,873	12,241,809	17,045,083	19,935,919
Costa Rica	1,320	4,516	6,208	5,041	10,162	7,498	23,613	1,924	8,217	20,024	12,303	14,264	13,678
Guatemala	2,062	1,851	1,613	732	2,367	9,852	9,111	2,882	20,078	47,260	39,161	21,956	20,535
Honduras	151	308	1,053	6,870	15,649	12,639	11,952	4,297	19,884	48,566	34,560	28,368	29,248
Nicaragua	86	741	47	609	666	964	2,264	4,894	26,930	56,222	10,203	2,324	4,606
Panama	4,689	11,738	16,988	25,861	34,180	56,657	72,180	26,403	88,546	116,272	123,292	69,781	121,874
Salvador	2,790	2,242	2,481	2,371	3,717	11,314	10,179	4,206	43,915	59,020	18,394	18,163	29,123
Mexico	47,479	46,743	41,508	30,819	42,258	125,823	431,440	260,492	704,873	1,074,909	1,528,729	902,812	964,219
Miquelon, Langley & St. Pierre Is	.....	.....	300	.....	25	5	65	29	279	69	12	48	10
Newfoundland and Labrador	2,026	2,993	3,901	3,632	8,672	9,972	4,129	5,245	26,196	28,582	19,018	19,057	24,583
Barbados	3,209	5,055	4,177	4,216	6,383	14,452	15,089	7,192	25,902	38,110	31,343	20,134	19,861
Jamaica	23,569	25,355	24,693	32,337	53,867	54,854	65,429	22,071	92,521	196,662	151,667	92,912	136,561
Trinidad and Tobago	4,847	9,119	13,003	12,865	21,826	44,060	55,794	24,355	104,251	175,810	116,594	64,289	63,669
Other British West Indies	1,426	1,157	2,538	3,707	9,303	12,868	21,446	7,706	38,299	40,649	32,036	30,887	37,549
Cuba	31,594	35,928	48,217	101,429	411,731	906,710	1,028,276	566,079	1,582,241	2,288,292	1,527,363	724,137	1,042,999
Dominican Republic	3,381	1,331	3,439	3,633	12,389	35,301	39,816	44,189	88,744	218,212	124,582	113,699	114,945
Dutch West Indies	281	1,767	2,754	4,598	3,288	6,052	4,707	1,490	5,435	8,913	16,188	14,046	12,450
French West Indies	97	198	8,099	7,423	9,546	24,672	53,518	17,495	83,474	68,754	37,812	20,355	16,402
Haiti	331	2,212	1,095	185	3,285	3,962	24,385	7,949	49,922	68,920	39,492	40,049	65,911
Virgin Islands of U. S.	558	1,640	1,206	865	975	1,876	2,844	2,283	12,077	31,109	27,867	8,123	8,723
Argentina	70,446	74,138	92,633	49,990	222,637	1,458,111	3,088,534	706,571	3,753,370	7,265,651	3,658,276	3,357,170	6,660,402
Bolivia	25	172	1,209	2,880	3,453	11,864	14,533	4,891	18,519	19,076	13,029	11,502	11,616
Brazil	35,680	108,859	84,602	28,633	59,935	134,326	223,414	103,834	806,556	3,144,122	522,825	996,003	2,807,561
Chile	2,656	4,711	22,405	14,721	72,939	248,043	806,015	359,668	586,031	426,563	168,605	119,791	263,077
Colombia	7,681	18,676	19,970	9,695	18,967	27,777	40,717	8,549	77,159	216,841	121,611	93,637	153,253
Ecuador	3,461	9,115	6,324	4,458	8,014	12,648	12,964	4,251	21,949	50,384	36,582	18,002	16,642
British Guiana	3,181	3,809	4,583	5,116	6,809	23,597	35,081	23,882	40,460	50,483	34,015	15,799	19,339
Dutch Guiana	12	39	911	1,702	2,052	3,212	3,282	1,872	5,511	15,503	9,575	8,330	2,162
French Guiana	6	125	.....	165	328	11	2,337	17	307	191	248	715	2,988
Paraguay	32	.....	.....	1,030	848	228	698	21	1,978	8,694	9,369	176	4,701
Peru	1,604	2,550	5,982	4,727	5,458	27,332	88,098	61,925	173,348	474,832	227,387	102,970	219,531
Uruguay	12,599	32,978	21,401	14,359	27,086	125,913	183,005	47,408	372,223	609,409	202,050	163,136	280,718
Venezuela	4,648	20,123	36,286	28,750	40,783	87,768	57,873	28,842	110,496	212,835	154,536	83,744	116,090
Asia:													
Aden	.....	502	1,676	361	998	4,541	263	6	7,578	12,344	8,025	2,842	5,080
Armenia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	826	.....
British India	14,568	18,336	47,923	44,735	129,562	345,855	294,909	99,81	493,188	1,411,866	549,954	314,839	333,326
Ceylon	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17,158	28,225
Straits Settlements	5,273	14,660	25,100	20,388	39,025	70,043	69,968	66,920	151,991	583,215	160,762	66,328	254,735
Other British East Indies	829	901	4,099	4,062	8,540	27,710	23,273	4,100	13,319	95,321	24,740	773	970
China	2,254	3,134	5,825	5,265	21,661	54,753	60,134	39,714	175,579	302,758	154,017	96,934	99,682
Chosen	748	2,271	2,791	282	10,377	2,125	2,812	9,506	39,603	2,934	17,157	4,835	46,689
Java & Madura	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	157,442	200,774
Other Dutch East Indies	3,452	11,453	15,368	15,232	34,638	193,225	192,430	338,429	488,705	1,041,283	696,269	22,914	36,142
Far Eastern Republic	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	300	862	121
French Indo China	.....	.....	.....	274	.....	.....	1,998	2,367	9,356	42,210	35,329	8,555	6,317
Greece in Asia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,154	2,650	.....
Hejaz, Arabia & Iraq	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13,904	25,580	20,575
Hongkong	2,711	92	626	1,088	2,180	2,885	7,702	9,764	27,277	44,338	21,106	28,090	37,411
Japan	39,681	51,619	35,637	26,028	30,446	116,130	319,038	235,317	719,460	624,805	551,981	456,386	1,369,816
Kwantung	.....	.....	.....	.....	46	1,747	672	558	63,831	1,337	5,705	8,011	28,310
Palestine and Syria	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47,941	119,310	97,907
Persia	.....	.....	.....	174	.....	.....	1,090	3,080	270	8,415	19,143	9,769	1,225
Philippine Islands	62,631	53,434	69,933	40,228	63,756	116,670	178,036	198,489	600,646	859,396	365,989	209,646	209,982
Russia	.....	.....	.....	107,351	226,255	146,083	25,512	.....	194,613	18,265	4,233	.....	477
Siam	970	1,925	4,905	2,451	34,412	9,734	7,639	3,708	9,479	13,909	19,662	7,012	6,123
Turkey	30	239	67	214	.....	.....	.....	3,764	5,552	63,225	85,153	121	4,229
Other Asia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	101
Oceania:													
Australia	102,427	166,176	202,363	199,154	389,690	753,309	1,052,986	963,753	1,462,330	1,725,740	1,033,010	1,044,539	2,396,336
New Zealand	26,095	37,438	53,644	48,111	176,618	285,654	309,658	243,468	529,900	1,179,087	452,840	330,045	596,121
Other British Oceania	971	479	1,060	665	1,991	4,751	4,674	2,713	8,330	10,461	7,796	4,524	6,760
French Oceania	495	3,032	7,560	5,730	5,640	4,383	6,272	2,435	9,906	8,128	10,423	6,935	8,431
Other Oceania	.....	220	396	.....	66	936	7,138	2,107	7,961	9,037	12,092	6,999	6,904
Africa:													
Abyssinia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	130
Belgian Congo	.....	.....	.....	.....	34	.....	.....	.....	7,893	1,896	13,651	59,060	10,164
British Africa (West)	56	465	5,743	6,537	20,311	64,938	49,077	29,807	141,902	348,473	148,219	114,705	146,202
British Africa (South)	29,123	62,304	157,246	100,240	286,401	422,200	811,323	195,714	878,723	1,624,438	425,935	336,720	582,685
British Africa (East)	851	1,444	3,203	3,929	11,371	9,599	23,290	4,570	35,158	52,461	37,266	25,108	38,332
Canary Islands	13	879	1,505	1,939	2,111	3,261	1,300	645	1,018	23,538	38,487	58,377	33,190
Egypt	99	295	130	1,494	4,751	2,623	716	.....	27,886	104,582	129,367	63,613	70,233
Algeria & Tunis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,910	9,362
Other French Africa	327	73	200	2,660	2,458	2,316	7,163	18,146	64,201	117,272	63,141	21,061	35,122
Kamerun	.....	.....	999	522	21,098	.....	.....	.....	1,820	10,174	6,998	.....	.....
Italian Africa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	422	.....	1,963
Liberia	.....	.....	.....	13	.....	33	106	.....	66	100	.....	77	150
Madagascar	.....	.....	.....	.....	4	175	40	.....	.....	686	1,135	.....	.....
Morocco	.....	.....	166	3,386	9,928	2,431	7,347	1,350	48,455	39,104	52,574	28,803	50,070
Portuguese East Africa	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,418	10,630
Other Portuguese Africa	910	1,222	1,585	3,431	7,064	5,339	1,160	703	2,529	44,085	10,423	20,976	18,034
Spanish Africa	.....	.....	.....	103	.....	.....	.....	.....	.....	351	335	5,038	4,633
Total	$4,107,103	$5,240,266	$6,623,978	$7,853,058	$22,535,870	$27,420,849	$32,932,999	$17,344,624	$42,562,061	$86,198,013	$39,058,729	$38,297,736	$60,019,616

Canadian Passenger Car Exports

Country	1921		1922		1923	
	No.	Value	No.	Value	No.	Value
Aden	37	$14,211	18	$7,281	33	$10,355
Argentina	166	119,023	2,105	1,350,099	1,869	1,429,630
Australia	3,839	1,680,850	10,868	5,413,949	18,112	7,036,671
Austria			3	1,395	3	3,099
Belgium			331	262,008	269	207,904
Bolivia			2	1,794	23	24,771
Brazil	4	1,837	244	198,122	126	127,351
British Africa	1,265	585,756	3,039	1,451,804	6,146	2,659,231
British Guiana			37	25,229	82	53,970
British India	936	428,049	1,998	994,945	4,002	1,825,576
Br. East Indies, Other			36	10,381	2	688
Br. West Indies, Other			136	112,071	173	116,034
Canary Islands			14	9,126	9	6,553
Ceylon	40	18,809	277	121,116	492	224,010
Chile	2	1,810	22	20,647	92	120,299
China	20	22,945	138	120,867	186	142,728
Colombia			14	12,788	29	32,296
Costa Rica			7	7,278	8	6,983
Cuba			38	35,268	114	107,144
Denmark			79	68,928	38	32,828
Dutch Guiana			7	4,058	29	8,294
Dutch East Indies	1,000	442,677	670	325,670	1,772	726,062
Dutch West Indies			1	840	1	595
Egypt	12	6,048	72	37,448	35	20,992
Esthonia			2	1,817	6	6,979
Fiji Islands			13	6,073	32	9,418
Finland			5	2,050	3	1,669
French West Indies			10	7,384		
French Oceania			5	1,969		
Germany			2	2,796	15	7,104
Gibraltar			1	1,358	2	3,094
Greece			10	7,968	12	8,655
Guatemala			16	14,716	14	12,807
Haiti			3	2,516	1	610
Honduras			2	2,115		
Hongkong	37	56,953	23	21,783	50	45,427
Italy			6	6,532	2	2,188
Japan	4	4,229	184	147,740	260	166,714
Lithuania			2	2,484		
Malta			19	11,389	21	11,179
Mexico	4	5,329	147	156,945	142	157,260
Morocco			31	16,752	4	2,500
Netherlands	7	7,553	182	128,750	386	286,620
Newfoundland			38	23,842	47	28,683
New Zealand	584	295,846	2,848	1,504,172	8,662	4,136,398
Norway			149	114,587	52	52,646
Oceania			2	754	12	4,699
Panama			6	7,710		
Portugal	1	1,559	22	27,180	30	37,010
Portuguese Africa			6	4,147	47	20,218
Russia			1	1,068	2	2,426
Salvador			14	14,298	29	27,266
San Domingo			11	11,879	21	21,838
Siam	113	47,241	20	9,781	110	38,945
Spain			403	383,389	309	326,550
Straits Settlements	216	93,315	188	76,491	1,232	463,155
Sweden	39	26,057	609	327,219	695	524,901
Switzerland			72	61,388	34	23,619
Syria			44	38,868	6	4,786
Turkey	5	4,552	22	14,251	6	5,074
United Kingdom	763	586,933	9,867	7,051,544	11,080	7,576,662
United States	100	56,152	138	74,263	155	52,397
Uruguay	4	4,374	85	65,798	205	181,287
Venezuela			69	54,022	53	58,887
Other Countries	107	74,556	65	58,477	99	90,296
Total	9,305	$4,586,664	35,498	$21,061,377	57,481	$29,324,031

Canadian Parts Exports

Country	1921	1922	1923
Aden	$6,041	$4,921	$5,358
Argentina	116	80,603	162,813
Australia	212,811	597,213	798,172
Azores		5	
Belgium		3,129	2,971
Bolivia		790	560
Brazil		12,468	143,706
British Africa	159,981	194,768	486,662
British Guiana		419	609
British India	58,133	200,901	119,664
Br. Oceania, Other			1,763
British West Indies		3,702	2,818
Canary Islands		137	7
Ceylon	10,521	14,640	43,490
Chile		899	2,857
China		1,261	459
Colombia		449	1,433
Costa Rica		159	107
Cuba		100	100
Denmark		9,813	128,781
Dominican Republic			597
Dutch Guiana		67	65
Dutch East Indies	92,213	80,509	67,125
Dutch West Indies		39	
Ecuador		316	210
Egypt		407	1,222
Esthonia			163
Fiji Islands	12,519	3,691	955
Finland		88	90
France		11,189	
French Guiana		62	
French Oceania		462	481
Germany		80	
Greece		251	346
Guatemala		281	264
Haiti		21	25
Honduras		57	18
Hongkong			914
Italian Africa			22
Italy		1,600	
Japan		243	7,825
Malta		60	109
Mexico		2,285	310
Miquelon & St. Pierre		219	194
Morocco		500	
Netherlands		1,071	3,196
Newfoundland		4,806	9,154
New Zealand	182,171	90,684	234,609
Norway		2,392	4,560
Oceania		300	
Palestine			37
Panama		5	19,821
Paraguay			99
Persia		250	
Peru		83	43
Poland		20	169
Portugal		166	133
Portuguese Africa		173	86
Rumania			118
Salvador		533	573
San Domingo		1,224	
Siam	4,199	9,903	9,421
Spain		6,984	121,110
Straits Settlements	34,651	45,941	147,309
Sweden		2,808	6,466
Switzerland		634	521
Syria		487	481
Turkey		468	2,448
United Kingdom	210,008	441,147	509,468
United States	132,246	80,592	471,644
Uruguay		1,282	1,675
Venezuela		1,463	1,023
Other Countries	12,571	3,878	2,910
Total	$1,128,181	$1,926,098	$3,530,339

Canadian Truck Exports

Country	1921		1922		1923	
	No.	Value	No.	Value	No.	Value
Aden					32	$17,681
Australia	377	$184,508	1,574	$662,549	7,213	2,479,201
Belgium					1	751
British Africa	33	15,295	262	109,203	619	212,593
British India	304	144,548	154	66,218	704	235,142
Br. East Indies, Other					2	668
Br. West Indies, Other						
British Oceania					8	2,632
Ceylon	16	7,150	77	30,391	192	63,727
Chile					5	6,479
Dutch East Indies	384	195,961	51	22,428	30	9,835
Dutch West Indies					12	3,734
Fiji Islands						
Finland						
French Oceania						
Japan					6	2,004
Newfoundland					80	37,478
New Zealand	132	71,297	216	90,912	7	2,663
Portuguese Africa					1,189	409,804
Siam					4	1,304
Spain	36	16,795	25	10,350	119	39,522
Straits Settlements					5	1,760
United Kingdom	96	47,381	36	16,158	158	51,302
United States	14	11,984	147	73,634	2,024	908,167
Uruguay	10	9,000	6	4,189	18	12,826
Other Countries	19	14,861	16	8,487	11	4,386
Total	1,421	$718,780	2,564	$1,094,519	12,439	$4,503,659

Canadian Tire Exports

Countries	1921	1922	1923
Argentina	$185,349	$527,996	$644,050
Australia	25,054	260,687	573,407
Belgium	.....	47,089	120,322
Brazil	47,691	288,183	195,388
British Africa	109,971	260,995	296,720
British Guiana	14,219	22,877	22,799
British India	90,277	208,455	201,176
British West Indies	149,025	146,344	130,362
Ceylon	16,564	43,785	39,263
Chile	17,530	11,294	39,233
China	2,064	.....	28,739
Cuba	1,470	10	11
Denmark	79,109	28,418	67,108
Dutch East Indies	109,721	188,475	257,759
France	106,584	238,123	457,853
Italy	.....	.....	54,293
Japan	41,352	120,644	158,900
Netherlands	16,569	3,336	78,981
Newfoundland	2,668	639	82
New Zealand	83,252	418,762	735,293
Norway	.....	.....	1,032
Panama	17,678	.....	.....
Peru	1,015	341	.....
Spain	20,959	19,702	69,314
Straits Settlements	.....	34,455	124,500
Sweden	1,200	.....	42,364
Switzerland	.....	.....	15,273
United Kingdom	1,100,889	1,111,272	1,539,456
United States	74,672	11,414	13,763
Uruguay	16,218	10,775	76,214
Other Countries	135,618	455,191	346,758
Total	$2,466,718	$4,459,262	$6,330,419

American Motorcycle Exports

	1913	1914	1915	1916	1917	1918	July 1 Dec. 31 1918	Calendar Year 1919	1920	1921	1922	1923
Europe:												
Austria (Prior 1920 A.-Hungary)		29	7					8		13	8	101
		$5,875	$1,535					$1,620		$4,581	$2,050	$23,283
Azores, and Madeira Islands				1				2	21	8	4	27
				$228				$500	$6,797	$2,070	$1,188	$5,592
Belgium	25	65	1					571	1,033	532	1,027	591
	$5,176	$11,803	$151					$143,231	$323,344	$175,212	$274,690	$133,949
Bulgaria									1	2		
									$108	$453		
Czechoslovakia										33	87	364
										$10,704	$16,742	$91,025
Denmark	38	239	149	784	757	2	11	1,281	741	582	636	648
	$6,269	$43,325	$24,163	$128,186	$135,787	$650	$3,850	$348,265	$208,406	$193,828	$165,327	$150,220
Esthonia										13	22	96
										$3,992	$5,790	$25,329
Finland	21	78						149	259	111	74	221
	$4,479	$13,798						$38,015	$80,516	$41,860	$18,022	$51,302
France	39	132	56	216	78	90		272	672	292	296	451
	$8,043	$29,663	$11,573	$36,121	$14,562	$20,946		$84,421	$164,406	$79,278	$67,207	$86,287
Germany	96	231	2					5	7	135	142	
	$17,525	$48,201	$597						$1,227	$2,350	$35,420	$31,361
Gibraltar	2				3						1	1
	$338				$495	1					$345	$275
Greece		15		4	1	1		16	18	23	3	1
		$2,230		$868	$293	$400		$5,064	$5,447	$8,337	$483	$242
Iceland, and Faroe Islands						8	10	22				1
						$2,000	$2,755	$7,048				$312
Italy	115	342	121	790	1,666	1,940	562	1,069	2,281	571	953	1,384
	$23,298	$70,054	$24,190	$147,223	$349,667	$464,661	$121,578	$296,584	$652,450	$173,316	$236,509	$325,779
Latvia										10		13
										$3,667		$3,942
Malta, Gozo and Cyprus Islands									24	1	12	1
									$6,210	$225	$2,530	$191
Netherlands	18	89	348	998	1,224			2,656	5,181	1,938	2,251	2,063
	$4,570	$17,885	$67,962	$190,512	$237,008			$716,681	$1,433,854	$614,580	$605,642	$503,731
Norway	3	40	114	227	758	86	80	1,787	1,788	385	456	535
	$805	$8,009	$20,656	$41,943	$162,126	$21,414	$19,870	$518,472	$517,432	$133,309	$115,600	$128,503
Poland and Danzig									25	1		66
									$12,288	$271		$17,084
Portugal	16	89	91	197	241	222	125	341	228	18	90	88
	$3,424	$19,014	$18,609	$41,031	$57,981	$56,045	$27,821	$103,882	$74,350	$6,520	$25,856	$25,554
Rumania									4		3	4
									$1,644		$1,083	$1,095
Russia in Europe	85	408	649	2,103	14					7		19
	$17,819	$75,505	$137,771	$494,338	$1,679					$2,235		$4,038
Spain	40	76	122	206	703	426	226	1,079	1,416	332	793	427
	$9,220	$16,443	$21,472	$36,040	$146,398	$90,162	$58,550	$293,332	$457,841	$103,189	$211,269	$100,382
Sweden	14	179	90	457	1,059	73		2,651	5,888	1,328	427	1,099
	$3,162	$34,106	$18,556	$88,325	$245,062	$13,071		$776,120	$1,671,765	$421,888	$93,902	$261,941
Switzerland		5	6			2		145	591	84	176	321
		$1,229	$1,327			$393		$41,590	$161,020	$32,960	$49,197	$72,516
Turkey in Europe	1							30	39			
	$262							$7,405	$12,036			
England	1,036	1,604	3,324	3,797	287	28		1,158	2,783	567	591	773
	$203,734	$320,009	$578,836	$732,582	$61,710	$5,706		$326,307	$786,419	$183,132	$147,801	$175,444
Scotland	4	16	33	109				14	117	5	5	1
	$828	$3,284	$8,393	$21,900				$3,747	$35,786	$1,543	$1,243	$300
Ireland				50				3	2	4	2	
				$10,738				$395	$624	$800	$225	
Yugoslavia, Albania & Fiume											3	18
											$839	$4,588
North and South America:												
British Honduras						1		1	1		1	1
						$39		$75	$83		$155	$135
Canada	1,335	1,065	832	927	1,064	1,041	299	1,654	1,313	506	711	729
	$236,362	$193,987	$140,015	$148,409	$196,645	$198,738	$65,136	$380,325	$339,350	$157,401	$171,908	$160,448
Costa Rica	6		2	3					5	1	2	2
	$1,174			$1,418	$450				$1,542	$384	$295	$400
Guatemala	3	5	2	4	31	28		45	41	25	13	31
	$671	$1,242	$442	$804	$8,125	$5,033		$13,051	$13,085	$8,749	$3,669	$7,515
Honduras			5	4	2	2		3	5	4	4	17
			$1,159	$330	$400	$575		$961	$1,371	$1,224	$812	$3,216
Nicaragua				1	2	1	4	5	24	6	30	2
				$200	$462	$290	$987	$1,860	$7,748	$3,421	$4,464	$487
Panama	27	32	59	76	61	62	5	30	27	35	18	25
	$6,238	$7,725	$12,637	$15,387	$15,574	$16,710	$1,037	$8,373	$8,264	$12,097	$4,659	$5,992
Greenland												1
												$176
Salvador	1		3		8	20	12	18	18	11	1	
	$200		$919		$1,638	$4,458	$3,212	$5,849	$5,815	$4,407	$315	
Mexico	48	26	8	51	102	59	14	36	61	99	149	66
	$9,593	$5,481	$1,897	$9,877	$23,360	$14,622	$3,717	$10,465	$17,829	$32,442	$40,191	$14,108
Newfoundland and Labrador	3	8	7	12	5	3		4	1	1		1
	$717	$1,998	$1,226	$2,505	$1,062	$750		$726	$470	$850		$162
Barbados		6	11	5	11	14	2	5	8	5	5	1
		$1,455	$2,585	$757	$2,204	$2,763	$599	$1,274	$2,999	$1,703	$1,236	$100
Jamaica	2	7	8	18	32	30	9	15	58	23	9	15
	$500	$1,685	$1,625	$3,080	$4,672	$5,327	$1,524	$3,441	$16,947	$5,502	$1,456	$2,789
Trinidad and Tobago		16	14	12	26	14	4	10	18	5	22	10
		$4,086	$2,833	$2,506	$5,318	$2,452	$886	$2,647	$6,043	$1,725	$6,559	$1,434
Other British West Indies				2	10	31		9	17	3	11	11
				$480	$1,949	$4,167		$1,884	$4,863	$500	$1,931	$2,559
Cuba	43	80	75	66	73	165	50	175	221	60	22	54
	$8,285	$15,980	$13,880	$12,217	$15,076	$36,408	$12,899	$46,330	$60,018	$19,157	$5,156	$11,932
Dominican Republic	14	2		12	10	10	4	21	29	8	2	19
	$2,945	$376		$1,733	$1,173	$1,029	$836	$5,412	$9,151	$3,179	$511	$2,993
Dutch West Indies	1	1			2	3		1	1	2	10	6
	$166	$150	$196		$368	$904		$300	$387	$694	$2,338	$1,132
French West Indies			2		5	4	2	25	1		2	1
			$484		$900	$636	$500	$6,421	$250		$489	$130
Haiti	1				4	14	2	12	9	1	2	
	$62				$1,015	$4,026	$315	$3,651	$2,089	$282	$633	
Virgin Islands of United States	1	4					2	2	2	1	1	1
	$146	$630					$405	$457	$966	$678	$100	$89
Argentina	163	110	69	111	173	227	81	437	597	125	215	245
	$30,330	$23,470	$12,798	$20,299	$35,929	$48,655	$19,663	$125,929	$171,615	$41,440	$55,013	$60,114
Bolivia		1		9	7	11		4	6		13	52
		$261		$1,606	$1,918	$2,151		$1,560	$1,694		$3,420	$13,832
Brazil	57	61	43	78	88	94	18	247	268	1	33	60
	$12,090	$10,935	$7,743	$9,966	$16,051	$23,387	$4,583	$82,835	$81,485	$488	$8,478	$12,931

from 1913 to 1923

	1913	1914	1915	1916	1917	1918	July 1 Dec. 31 1918	Calendar Year 1919	1920	1921	1922	1923
Chile	39	37	2	14	34	88	6	67	130	1	6	14
	$8,134	$7,967	$570	$2,406	$6,389	$18,041	$1,572	$17,518	$37,588	$400	$1,432	$3,301
Colombia	4	9	11	12	11	13	5	8	24	3	8	12
	$900	$2,066	$2,359	$2,607	$2,128	$2,472	$740	$2,067	$8,082	$450	$1,399	$2,984
Ecuador	2	6	1	7	13	11	3	10	34		1	4
	$436	$852	$135	$1,493	$3,111	$2,216	$798	$2,864	$9,483		$301	$646
Guiana, British	2	8	7	8	30	55						
	$338	$1,523	$1,356	$1,383	$5,047	$8,828						
Dutch									4	1		
									$1,695	$480		
French								1				
								$120				
Paraguay				1					1			
				$196					$312			
Peru		3	3	8	25	5	6	1	18	5	11	10
		$632	$847	$1,576	$4,546	$1,103	$1,170	$370	$4,918	$1,500	$2,612	$1,822
Uruguay	15	10		21	49	26	17	90	133	21	28	25
	$2,921	$2,409		$4,743	$9,207	$5,892	$4,935	$22,715	$40,767	$6,766	$7,145	$6,688
Venezuela	18	23	4	4	22	2	1	8	8	4	11	20
	$3,466	$4,725	$912	$456	$4,746	$573	$347	$1,885	$2,384	$1,223	$2,193	$4,937
Asia:												
Aden			2	14	6			6			2	549
			$246	$2,431	$787			$1,439			$259	$139,746
Ceylon											49	35
											12,632	$9,029
China	18	20	25	11	92	77	57	239	157	57	42	88
	$4,542	$4,786	$6,790	$2,562	$16,943	$13,822	$10,811	$47,883	$49,874	$18,365	$12,690	$21,971
Kwantung (leased territory)						2	1	12	7	1		
						$350	$200	$2,520	$1,660	$300		
Chosen (Korea)	6		2	7	23	10	3	7	19	12		
	$1,350		$413	$1,008	$4,852	$2,396	$685	$1,951	$5,283	$4,620		
British India	4	11	4	214	558	16		682	1,331	213	245	264
	$570	$2,404	$925	$40,338	$111,411	$3,796		$189,108	$381,815	$73,901	$60,966	$64,353
Straits Settlements	11	11		11	82	140	10	106	344	18		14
	$3,349	$2,116		$1,789	$15,773	$30,899	$2,146	$23,630	$87,415	$8,113		$3,040
Other British East Indies	2	7	3	18	140	65		34	161	14	1	1
	$591	$1,811	$1,211	$3,050	$26,198	$16,192		$11,393	$48,326	$4,336	$715	$124
Java and Madeira											239	151
											$57,090	$31,588
Other Dutch East Indies	3	20	54	185	1,079	251	268	634	1,283	376	2	6
	$642	$4,916	$11,871	$34,753	$229,167	$50,126	$52,591	$142,007	$371,762	$124,140	$400	$1,147
Hejaz, Arabia and Iraq												1
												$290
Far Eastern Republic											1	
											$184	
French Indo China												3
							1		14			$600
Greece in Asia							$108		$3,175			
											2	
Hongkong		1	2	23	37	18	14	85	167	36	$273	
		$325	$690	$4,353	$7,531	$3,070	$3,549	$24,515	$44,710	$14,832	34	56
Japan	137	21	14	19	122	394	270	864	751	555	$9,201	$11,293
	$25,833	$4,548	$3,597	$3,191	$25,716	$78,324	$64,056	$208,066	$206,806	$181,367	735	1,234
Palestine and Syria											$192,482	$295,585
											1	9
Persia											$370	$2,362
						2						
Russia in Asia						$730						
		1		18	21				10			
		$115		$3,738	$5,380				$2,687			
Siam		3	6	6	21	17	5	21	19	7		5
		$648	$1,375	$1,189	$3,626	$3,311	$860	$4,493	$4,864	$2,634		$1,101
Turkey in Asia	1	1					2	4	5	5		
	$206	$152					$591	$1,564	$1,235	$1,390		
Oceania:												
Australia	24	786	709	2,394	2,998	1,678	1,004	2,004	2,910	803	3,706	6,060
	$4,706	$132,998	$137,269	$475,157	$634,011	$380,786	$251,433	$570,967	$855,581	$229,245	$893,812	$1,486,827
New Zealand	136	29	333	1,576	1,108	731	310	1,308	2,007	440	806	1,667
	$22,664	$6,029	$49,072	$282,049	$236,432	$157,432	$79,742	$378,020	$569,741	$149,815	$204,680	$426,409
Other British Oceania			11	10	5	1	3	3	7	1	1	11
			$1,560	$2,120	$1,330	$267	$1,001	$1,023	$2,459	$431	$223	$2,018
French Oceania	6				2	4	3	11			2	
	$1,157				$628	$1,186	$513	$2,426			$275	
Other Oceania					1	1			1	3	2	1
					$298	$96			$110	$759	$783	$290
Philippine Islands	257	134	135	247	142	163	20	118	200	50	35	44
	$42,052	$25,690	$29,383	$51,276	$30,743	$35,725	$4,032	$32,092	$54,119	$15,044	$9,060	$8,844
Africa:												
Algeria and Tunis											1	3
											$390	$444
Belgian Congo						1			2	4	8	
						$289			$530	$845	$1,302	
British Africa, West		2	2	72	29	86	21	133	107	34		11
		$418	$396	$15,689	$3,575	$12,336	$2,737	$31,570	$29,725	$8,745		$2,493
South	40	187	555	1,144	1,364	1,874	129	1,786	1,536	455	547	839
	$6,784	$33,659	$101,210	$204,302	$252,478	$449,846	$36,277	$480,814	$450,325	$144,089	$135,534	$203,172
East		1	6	69	32	155	15	135	27	39	13	44
		$251	$834	$12,210	$5,033	$34,358	$4,500	$39,869	$7,202	$14,253	$3,502	$10,862
Canary Islands		2	14	9	5			6	18	4	2	2
		$493	$2,732	$2,056	$984			$1,666	$5,835	$955	$725	$428
Egypt		4	2	20	39			44	284	12	21	69
		$739	$438	$3,559	$7,251			$14,887	$81,968	$2,828	$5,707	$17,921
French Africa					1	1		17	9	5	1	10
					$432	$237		$3,886	$2,091	$1,150	$184	$1,984
Italian Africa									1			
									$203			
Kamerun		1	1					1	4	5		
		$201	$473					$175	$968	$1,599		
Liberia					2				1			
					$300				$207			
Madagascar				3	1							
				$502	$217							
Morocco			1		1	1		6	3	11	42	36
			$283		$355	$360		$2,416	$1,050	$2,120	$6,928	$5,628
Portuguese Africa		11	5	23	4	3	2	17	37	12		4
		$1,827	$999	$5,000	$1,034	$520	$565	$5,012	$11,591	$4,352		$905
Portuguese East Africa											40	4
											$10,546	$856
Spanish Africa				2		3				3		
				$575		$638				$899		
Grand Total Number	3,983	6,410	8,166	17,499	16,609	10,599	3,700	24,481	37,622	11,001	15,976	22,112
Value	$749,072	$1,234,194	$1,494,176	$3,369,366	$3,404,716	$2,364,785	$876,682	$6,687,436	$10,756,580	$3,517,769	$4,028,742	$5,298,597

Agricultural Tractor Exports 1922-1923

Countries	1922								1923							
	Garden		Wheel		Track Laying		Total		Garden		Wheel		Track Laying		Total	
	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value
Europe																
Azores and Madeira			1	$304			1	$304			1	351			1	351
Belgium			182	72,908	13	$8,186	195	81,094			767	285,029	76	53,675	843	338,704
Bulgaria			22	8,545			22	8,545								
Czechoslovakia			1	385			1	385								
Denmark			225	80,481			225	80,481			1,222	531,230			1,222	531,230
Esthonia											81	30,190	2	1,370	83	31,560
Finland			50	18,687			50	18,687	1	175	102	36,673			103	36,848
France	1	$125	459	186,155	60	41,699	520	227,979	1	159	1,208	495,937	15	12,390	1,224	508,486
Germany	1	140					1	140	1	137	16	16,187	1	1,739	18	18,063
Gibraltar											1	900			1	900
Greece	3	1,107	13	5,887			16	6,994					2	8,418	2	8,418
Hungary			6	2,371			6	2,371								
Iceland											7	1,970			7	1,970
Italy			1	370			1	370			545	193,976	2	2,800	547	196,776
Latvia			29	36,650	2	4,576	31	41,226	51	8,404	227	99,693			278	108,097
Lithuania											4	3,000	10	12,500	14	15,500
Malta, Gozo and Cyprus Islands	1	383	16	5,863			17	6,246			10	3,682			10	3,682
Netherlands	1	290	9	4,210	2	6,932	12	11,432			13	8,809	22	13,300	35	22,109
Norway											15	5,466			15	5,466
Poland and Danzig			1	480			1	480	2	259	50	15,149			52	15,408
Portugal					2	4,200	2	4,200			3	2,039			3	2,039
Rumania			5	1,756			5	1,756								
Russia			12	8,255	14	56,014	26	64,369			354	151,914	2	15,850	356	167,764
Spain	4	1,261	433	150,947	26	15,955	463	168,163	26	6,609	482	171,199	9	6,375	517	184,183
Sweden			1	400	5	2,580	6	2,980			52	28,566			52	28,566
Switzerland					10	6,100	10	6,100					10	7,250	10	7,250
Turkey			56	22,035			56	22,035	15	5,550	91	34,234			106	39,784
Ukraine	2	492	81	35,400	30	52,851	113	88,743			142	55,810			142	55,810
England	4	1,665	58	63,460	7	5,287	69	70,412	25	3,562	1,433	570,877	31	63,535	1,489	637,974
Scotland			3	3,200			3	3,200					2	1,708	2	1,708
Ireland											60	22,417			60	22,417
Yugoslavia, Albania, etc.			2	757			2	757								
North and South America																
Canada	298	38,316	4,424	2,644,788	37	51,309	4,759	2,734,413	32	11,266	5,923	4,508,320	62	191,430	6,017	4,711,016
British Honduras			21	7,714			21	9,714			47	32,424	8	27,252	55	59,676
Guatemala			3	4,545			3	4,545			6	5,701			6	5,701
Costa Rica											1	492			1	492
Honduras			3	1,248			3	1,248			21	20,620	5	15,551	26	36,171
Nicaragua			2	1,400	3	3,075	5	4,475			3	1,748	1	2,750	4	4,498
Panama			3	915	1	6,350	4	7,265			3	2,276			3	2,276
Salvador											1	720			1	720
Greenland											5	2,105			5	2,105
Mexico	3	875	209	167,736	13	35,186	225	203,797	84	2,085	177	100,808	27	101,620	288	204,513
Newfoundland and Labrador					2	12,558	2	12,558			2	721	7	21,705	9	22,426
Bermuda									1	198					1	198
Barbados			1	351			1	351	2	340	3	1,076	1	5,468	6	6,884
Jamaica					2	5,239	2	5,239			4	3,639	1	2,335	5	5,974
Trinidad and Tobago	1	160	1	351	2	5,657	4	6,168			8	4,515			8	4,515
Other British West Indies			1	370			1	370	8	1,390	3	1,091			11	2,481
Cuba			73	27,488	11	28,226	84	55,714	3	499	370	174,985	36	128,049	409	303,533
Dominican Republic			1	2,404			1	2,404			14	5,013	5	2,240	19	7,253
Dutch West Indies											2	741			2	741
French West Indies			5	2,450			5	2,450			11	4,063			11	4,063
Haiti											4	6,147	1	4,450	5	10,597
Virgin Islands									1	170					1	170
Argentina	25	10,436	1,758	867,901	30	30,382	1,813	908,719	58	13,149	2,087	1,276,764	19	59,554	2,164	1,349,467
Bolivia			1	475			1	475			3	1,557			3	1,557
Brazil			220	83,697	2	6,680	222	90,377	2	231	231	82,982	2	7,500	235	90,713
Chile			16	5,619			16	5,619			70	24,782	24	17,845	94	42,627
Colombia	2	729	16	12,437	5	17,044	23	30,210	3	621	24	31,683	14	28,563	41	60,867
Ecuador			9	6,030	3	20,427	12	26,457			9	7,783	7	7,735	16	15,518
British Guiana					2	6,971	2	6,971			26	12,418	10	38,260	36	50,678
Dutch Guiana	2	650					2	650								
Peru	4	249	21	13,717	2	1,080	27	15,046			147	65,020	3	3,383	150	68,403
Uruguay			194	75,615			194	75,615	19	1,630	161	72,064			180	73,694
Venezuela			2	12,778	5	26,147	7	38,925			9	21,221	7	35,955	16	57,176
Asia																
Aden									1	109					1	109
Armenia and Kurdistan			21	17,649			21	17,649								
British India	7	996	11	7,162	24	74,220	42	82,378			29	56,659	5	31,246	34	87,905
Straits Settlements					1	4,716	1	4,716					3	3,995	3	3,995
China	2	300	3	4,400			5	4,700			4	5,253			4	5,253
Chosen			1	1,100			1	1,100								
Java and Madura			2	1,152	1	4,459	3	5,611			1	576	1	4,340	2	4,916
Other Dutch East Indies	5	1,391					5	1,391								
Far Eastern Republic											5	6,130			5	6,130
French Indo China													1	539	1	539
Greece in Asia			1	385			1	385								
Hejaz, Arabia and Iraq											1	365			1	365
Hongkong											2	650			2	650
Japan	53	9,252	20	28,735	40	121,306	113	159,293	51	10,323	52	25,541	37	123,516	140	159,380
Kwantung			2	1,393			2	1,393			1	971			1	971
Palestine and Syria	3	939	10	6,807			13	7,746			46	19,520			46	19,520
Philippine Islands			3	676			3	676	1	223	51	23,634	3	11,274	55	35,131
Siam			1	2,525	3	17,190	4	19,715			1	659			1	659
Turkey			1	387			1	387								
Oceania																
Australia	7	1,328	463	323,967	53	54,509	523	379,804	1	169	2,582	1,746,513	259	299,348	2,842	2,046,030
Other British Oceania											17	30,109	2	9,133	19	39,242
French Oceania											1	1,025	1	950	2	1,975
New Zealand			22	12,650	7	4,075	29	16,725	1	180	80	53,582	1	1,648	82	55,410
Other Oceania			1	500			1	500								
Africa																
Belgian Congo			9	3,523			9	3,523			11	4,594			11	4,594
British West Africa	1	340	1	720			2	1,060			5	4,100			5	4,100
British South Africa									2	547	26	18,585	5	4,530	33	23,662
British East Africa					55	34,536	55	34,536					39	26,453	39	26,453
Egypt			7	2,524			7	2,524					2	13,929	2	13,929
Algeria and Tunis			16	6,022	22	22,942	38	28,964			65	32,129	38	46,497	103	78,626
Other French Africa											1	370			1	370
Madagascar													3	3,035	3	3,035
Morocco	1	291	39	13,928			40	14,219			74	26,355			74	26,355
Portuguese East Africa											1	2,200			1	2,200
Other Portuguese Africa			2	800			2	800								
Spanish Africa											10	3,700			10	3,700
Totals	431	$71,715	9,286	$5,088,640	497	$798,664	10,214	$5,959,019	392	$67,985	19,327	$11,301,997	824	1,482,988	20,543	$12,852,970

German Motor Truck and Chassis Exports

Countries	1920, No.	1921, No.	1922, No.	1923, (9 mos.) No.	Total No.
Aegypten					
Alsace Lorraine					
Argentina			75	46	121
Australia					
Austria	99	7	26	24	156
Baltic Russia			91	51	142
Baltic States	7	66			73
Belgium			289	14	303
Brazil	127	14	71	8	220
British India			21	2	23
British Malakka					
British South Africa					
Bulgaria					
Chile			14	18	32
China			63	10	73
Cuba	183	11			194
Czechoslovakia	26	12	14	13	65
Danzig			29	9	38
Denmark	644	62	66	24	796
Dutch India			75	5	80
Dutch East Indies	168	111			279
East Poland					
Egypt					
Finland	355	59	92	79	585
France			29	2	31
Great Britain	777	93	49	20	939
Greece			8	1	9
Hungary				2	2
Italy			9	12	21
Japan			14	30	44
Luxemburg			85	6	91
Memel District			11	2	13
Mexico					
Morocco			71	11	82
Netherlands	1,343	326	787	163	2,619
Norway	312	41	42	14	409
Peru					
Poland			6	23	29
Portugal	268	4	20	2	294
Rumania			16	11	27
Russia			9	222	231
Saar District			184	43	227
Siam					
Spain	1,371	223	447	53	2,094
Sweden	1,116	100	166	56	1,438
Switzerland	998	38	28	16	1,080
Turkey			11	1	12
United States					
Uruguay					
Yugoslavia			12	7	19
Other Countries	915	651	246	108	1,920
Total	8,709	1,818	3,176	1,108	14,811

German Passenger Car and Chassis Exports

Countries	1920, No.	1921, No.	1922, No.	1923, (9 mos.) No.	Total No.
Aegypten					
Alsace Lorraine	23	1			24
Argentina	34	27	105	50	216
Australia			50	107	157
Austria	159	167	233	218	777
Baltic Russia			175	117	292
Baltic States	11	45			56
Belgium	205	423	469	25	1,122
Brazil	77	26	42	9	154
British India			37	33	70
British Malakka					
British South Africa			39	5	44
Bulgaria					
Chile					
China			180	42	222
Cuba					
Czechoslovakia	17	69	195	71	352
Danzig			112	129	241
Denmark	875	520	604	312	2,311
Dutch India			38	21	59
Dutch East Indies	44	35			79
East Poland	39	4			43
Egypt			130	39	169
Finland	120	79	174	91	464
France	25	2	44	2	73
Great Britain	510	52	162	56	780
Greece			59	20	79
Hungary			77	91	168
Italy	73	32	64	64	233
Japan			117	428	545
Luxemburg			66	7	73
Memel District			52	8	60
Mexico					
Morocco			20	2	22
Netherlands	1,862	665	899	352	3,778
Norway	447	49	99	60	655
Peru			10	4	14
Poland			9	55	64
Portugal	99	19	61	28	207
Rumania	36	38	109	46	229
Russia			16	112	128
Saar District			115	59	174
Siam			25	4	29
Spain	736	128	348	144	1,356
Sweden	1,488	441	494	273	2,696
Switzerland	1,266	273	379	270	2,188
Turkey			40	20	60
United States	68	76	74	46	264
Uruguay	3				3
Yugoslavia			24	18	42
Other Countries	560	789	90	264	1,703
Total	8,777	3,960	6,036	3,702	22,475

American Exports of Electric Cars and Trucks

Countries	1922 No.	1922 Value	1923 No.	1923 Value
NORTH AND SOUTH AMERICA:				
Canada	20	$24,395	31	$50,769
Panama	..	....	15	19,974
Salvador	3	7,376	1	800
Mexico	9	7,095	37	27,582
Newfoundland and Labrador	1	3,778	1	2,732
Trinidad and Tobago	2	1,642	..	....
Other British West Indies	1	1,748	1	100
Cuba	1	1,902	2	2,056
Argentina	1	3,000	3	8,730
Brazil	1	1,620	2	7,255
Chile	1	2,593	..	....
British Guiana	1	880	..	....
Peru	2	7,009	..	....
Venezuela	1	1,400	3	15,280
ASIA:				
British India	3	3,409	2	5,000
Ceylon	2	2,928	..	....
China	9	7,478	..	....
Chosen	10	22,680	..	....
Other Dutch East Indies	5	4,106	..	....
Japan	179	$247,241	50	$64,520
Philippine Islands	1	2,714	2	4,017
EUROPE:				
Belgium	2	2,047	1	1,414
Denmark	2	1,546	..	....
France	3	7,272	..	....
Netherlands	3	4,791	22	20,849
Norway	4	2,720	..	....
Spain	4	8,799	1	2,100
Sweden	9	15,180	13	22,552
Turkey in Europe	4	3,000	..	....
England	3	5,025	9	13,557
OCEANIA:				
Australia	30	36,860	3	7,920
New Zealand	..	....	1	2,215
Other Oceania	2	1,200	..	....
AFRICA:				
British East Africa	1	1,046	..	....
British South Africa	5	5,787	5	5,727
Other Portuguese Africa	..	..	1	1,183
Total	325	$450,267	206	$286,332

U. S. Exports to U. S. Non-Contiguous Territories

1923

	Cars No.	Cars Value
Alaska	257	$ 222,058
Hawaii	3830	2,743,161
Porto Rico	2150	1,683,215
	6237	$4,648,434

	Trucks No.	Trucks Value	Parts Value
Alaska	36	$28,185	$64,134
Hawaii	560	471,821	564,585
Porto Rico	372	344,413	351,977
	968	$844,419	$980,696

British Passenger Car Exports

Country	1921		1922		1923*	
	No.	Value	No.	Value	No.	Value
Argentina					9	£6,539
Australia	105	£82,906	158	£77,224	524	232,564
Belgium	20	18,813	19	13,490	12	5,731
Brazil	13	19,482	24	12,829	1	955
British Africa	123	68,364	70	39,891	246	71,773
British India	403	375,515	265	167,133	304	135,588
Canada	40	55,136	32	32,289	17	19,098
Ceylon	39	22,367	31	12,514	58	16,549
China					41	16,510
Denmark	47	43,370	34	19,999	41	18,475
Egypt	36	23,076	22	19,599	19	5,771
France	27	31,588	26	25,409	25	23,149
Germany					8	3,003
Japan	64	63,093	38	18,632	43	15,534
Netherlands					63	25,787
New Zealand	128	80,312	100	44,735	321	111,499
Norway					3	923
Portugal					12	7,496
Rumania	5	4,535	1	2,774	1	1,237
Russia	4	9,100	3	2,532	10	10,682
Spain	65	77,866	29	27,720	54	40,483
Straits Settlements	79	57,144	44	23,663	82	30,491
Sweden					31	14,235
Switzerland					10	8,164
United States	26	43,963	66	89,099	17	20,091
Other Countries	746	566,796	411	221,291	782	206,956
Total	1,970	£1,643,426	1,373	£850,823	2,739	£1,049,283

*Eleven Months.

British Truck Exports

Country	1921		1922		1923*	
	No.	Value	No.	Value	No.	Value
Argentina					13	£3,822
Australia	84	£61,402	88	£61,404	83	70,233
Belgium	9	9,298	8	3,853	4	2,412
Brazil	13	8,125	32	45,059	1	900
British Africa	18	27,761	30	21,460	63	39,347
British India	149	165,248	63	39,117	181	150,577
Canada	2	3,613	13	13,251	2	1,650
Ceylon	1	1,833	7	4,484	17	3,678
China					7	4,102
Denmark	2	4,120	2	515		
Egypt	10	12,284	14	1,437	11	2,820
France	13	9,825	5	1,880	10	3,490
Japan	6	10,124	9	10,299	27	8,767
Netherlands					15	6,847
New Zealand	23	19,557	46	32,772	41	26,515
Norway					5	4,530
Portugal					2	105
Rumania	3	1,206	1	200		
Russia			8	7,849	4	2,728
Spain	14	14,569	74	103,284	62	94,477
Straits Settlements	19	23,519	7	8,208	11	12,377
Sweden					17	12,492
United States					2	400
Other Countries	418	316,536	189	355,072	284	139,822
Total	784	£689,020	596	£710,144	862	£592,091

*Eleven Months.

French Car and Truck Exports, 1922 and 1923

Countries	1922		1923 (9 mos.)	
	Cars No.	Trucks No.	Cars No.	Trucks No.
Algeria	1,973	167	2,197	142
Argentina	45	3	87	
Australia	94			
Belgium	3,711	905	3,600	345
Brazil	16	7	16	
British Africa	41	2		
British India	36	6		
Canada	2			
China	45	3		
Chile	5	1		
Czechoslovakia	4			
Cuba	3			
Denmark	30			
Dutch East Indies	22			
Egypt	88	4		
England	4,708	1,372	5,765	155
France				
French Indo-China			627	26
Free French Zones	18	2		
Germany	151	9	790	7
Greece	7	1		
Holland	39	2	121	1
Indo China	264	13		
Ireland	44	1		
Italy	20	2	103	
Japan	148	2	262	
Luxemburg	48	20		
Madagascar	18	4	40	5
Mexico	16	2		
Morocco	301	295	157	73
Norway	3		23	
Netherlands				
Portugal	57	8		
Reunion Is.	22	1		
Rumania	20	44		
Russia	10	16		
Saar Territory	11	5	697	37
Senegal	62	24	33	6
Spain	686	363	2,092	359
Sweden	83		133	14
Switzerland	629	106	1,532	356
Tunis	170	23	183	34
Turkey	66	124		
United States	237	241	92	
West Coast Africa	19	5		
Other Countries	19	63	1,435	161
Total	13,991	3,846	19,985	1,731

United States Exports of Spark Plugs, Magnetos, etc.

Country	1922 Value	1923* Value
EUROPE		
Austria		$76
Azores		50
Belgium	$9,602	19,914
Czechoslovakia	763	796
Denmark	17,809	15,816
Esthonia		4,034
Finland	6,289	6,305
France	85,205	169,598
Germany	150	228
Gibraltar	390	410
Greece	1,171	724
Iceland and Faroe Islands	146	257
Italy	5,139	20,160
Latvia	50	
Malta, Gozo and Cyprus	150	100
Netherlands	11,224	14,624
Norway	7,074	6,614
Poland and Danzig	699	592
Portugal	135	2,470
Russia		2,132
Spain	33,646	36,258
Sweden	20,937	26,405
Switzerland	386	2,799
Turkey	1,412	503
Ukraine		720
England	56,526	44,543
Scotland	176	841
Yugoslavia	360	
OCEANIA		
Australia	46,296	89,361
New Zealand	9,307	20,869
Other British Oceania	413	378
French Oceania	890	148
Other Oceania	149	186

Country	1922 Value	1923 Value
NORTH AND SOUTH AMERICA		
Canada	440,351	563,480
British Honduras	1,035	1,110
Costa Rica	426	429
Guatemala	443	732
Honduras	2,657	4,412
Nicaragua	1,280	1,792
Panama	7,327	9,718
Salvador	534	331
Mexico	31,658	27,108
Miquelon	33	
Newfoundland	652	2,329
Barbados	906	1,994
Jamaica	1,106	1,231
Trinidad and Tobago	2,826	3,081
Other British West Indies	1,318	648
Cuba	26,415	31,222
Dominican Republic	2,423	3,506
Dutch West Indies	296	180
French West Indies	64	122
Haiti	293	142
Virgin Islands	50	50
Argentina	79,398	79,161
Bolivia		43
Brazil	20,483	14,911
Chile	3,308	9,743
Colombia	3,178	5,210
Ecuador	1,659	1,605
British Guiana	1,008	2,196
Dutch Guiana	126	710
French Guiana	37	69
Peru	6,604	5,761
Uruguay	2,363	3,566
Venezuela	3,604	4,744

Country	1922 Value	1923 Value
ASIA		
Aden	385	747
British India	12,921	11,910
Ceylon	213	2,381
Straits Settlements	6,366	19,998
China	4,017	5,266
Chosen	1,092	780
Java and Madura	8,776	14,121
Other Dutch East Indies	932	2,495
French Indo-China		56
Hejaz. Arabia and Iraq		2,207
Hongkong	1,090	2,936
Japan	58,241	101,245
Kwantung	22	89
Palestine and Syria	3,565	4,626
Philippine Islands	8,135	20,389
Siam	2,767	1,242
Turkey in Asia		85
AFRICA		
British West Africa	3,629	5,855
British South Africa	11,645	11,745
British East Africa	162	562
Canary Islands	4	370
Egypt	5,075	4,410
Algeria and Tunis	524	893
Other French Africa	387	110
Liberia		101
Morocco	1,184	1,861
Other Portuguese Africa	133	157
Spanish Africa	882	
	$1,092,502	$1,485,884

*Eleven months.

British Exports Motor Vehicle Chassis

Countries	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923*
Argentina										*19*		*15*	*10*
										£19,209		£10,907	£ 5,478
Australia	*367*	*702*	*617*	*413*	*112*	*126*	*15*	*20*	*96*	*876*	*342*	*549*	*1212*
	£137,062	£229,592	£175,154	£122,591	£35,173	£42,016	£4,283	£3,374	£56,911	£515,418	£235,749	£273,394	£519,274
Belgium	*36*	*32*	*37*	*81*					*83*	*43*	*25*	*4*	*30*
	£13,690	£11,191	£13,520	£49,577					£59,160	£43,324	£35,809	£834	£20,265
Brazil									*5*	*19*	*8*		*5*
									£4,295	£14,784	£8,257		£4,486
British Africa									*10*	*55*			*43*
									£7,283	£44,594			£27,744
British East Indies	*38*	*53*	*109*	*89*	*51*	*152*	*35*	*7*					
	£16,592	£21,018	£45,405	£34,570	£16,518	£65,739	£18,448	£6,170					
British India									*174*	*908*	*49*	*207*	*28*
									£124,049	£748,814	£50,026	£146,064	£14,898
Canada	*8*	*37*	*65*	*13*					*14*	*26*	*21*	*29*	*29*
	£3,567	£21,096	£37,586	£7,987					£9,618	£25,244	£16,546	£16,497	£18,838
Ceylon									*7*	*56*	*2*	*1*	*3*
									£4,952	£26,143	£1,226	£485	£1,589
China									*4*	*34*		*14*	*15*
									£3,707	£26,328		£8,962	£10,685
Cuba										*24*			
										£26,871			
Denmark									*43*	*23*	*2*	*2*	*4*
									£35,031	£18,989	£385	£1,005	£1,077
France	*77*	*114*	*134*	*154*	*35*	*139*	*190*	*25*	*31*	*91*	*72*	*21*	*43*
	£40,316	£63,070	£98,351	£114,147	£18,040	£60,769	£95,712	£23,940	£14,618	£108,348	£90,691	£26,278	£43,466
Germany	*55*	*32*	*25*	*26*									*2*
	£25,136	£12,990	£10,767	£11,382									£344
Japan									*4*	*21*	*67*	*9*	*20*
									£1,864	£13,406	£39,974	£3,127	£10,646
Netherlands									*58*	*60*		*8*	*21*
									£44,696	£48,784		£5,531	£16,620
New Zealand						*37*	*6*	*2*	*51*	*431*	*89*	*129*	*233*
						£10,308	£3,638	£1,350	£43,157	£316,089	£74,477	£74,748	£107,951
Norway									*13*	*11*			*1*
									£7,440	£6,836			£1,615
Portugal									*3*	*22*		*2*	*4*
									£2,120	£16,842		£2,500	£4,007
Russia	*7*	*11*	*8*	*383*	*48*	*48*	*391*			*15*		*3*	
	£2,300	£1,540	£3,752	£209,860	£20,654	£48,378	£243,844			£12,887		£1,897	
Spain									*7*	*53*	*27*	*8*	*14*
									£3,937	£46,431	£40,656	£14,431	£13,563
Straits Settlements									*3*	*94*	*34*	*14*	*30*
									£2,737	£82,933	£24,282	£8,603	£16,044
Sweden									*2*	*21*		*2*	
									£1,550	£16,319		£330	
Switzerland													*11*
													£10,552
United States	*59*	*14*	*7*	*65*	*53*	*36*	*5*		*10*	*145*	*63*	*17*	*10*
	£27,492	£6,949	£4,359	£51,410	£41,642	£30,076	£2,850		£8,742	£214,357	£104,891	£18,796	£11,405
Other Countries	*88*	*185*	*232*	*212*	*184*	*28*	*16*	*11*	*60*	*97*	*208*	*94*	*92*
	£30,534	£69,778	£76,389	£78,172	£55,104	£11,218	£4,712	£3,922	£35,718	£74,730	£204,842	£32,841	£31,195
Total	*735*	*1,180*	*1,234*	*1,436*	*483*	*566*	*658*	*65*	*678*	*3,124*	*1,009*	*1,128*	*1,860*
	£296,689	£437,224	£465,283	£679,696	£187,181	£268,504	£373,487	£38,756	£471,585	£2,467,680	£927,811	£647,230	£891,742

*Eleven months.

British Parts Exports

Countries	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923*
Argentina						£14,472	£26,195		£12,295	£11,717
Australia	£139,034	£137,388	£56,574	£43,262	£36,145	102,877	271,034	£112,183	66,946	94,863
Belgium	61,872	13				61,485	132,858	67,375	33,731	45,586
Brazil						7,556	14,576	37,760	4,337	4.327
British Africa	68,047	58,403	58,540	33,026	23,128	70,838	177,790	47,097	25,677	61,804
British East Indies	19,526	21,185	114,981	103,478	77,328					
British India	69,342	68,185				163,434	178,670	264,670	93,979	162,586
Canada	2,634	1,837				6,354	12,503	13,885	16,751	37,763
Ceylon						11,421	30,026	8,028	8,174	10,025
China									5,731	2,816
Denmark						25,135	80,386	21,964	12,456	58,627
Egypt						20,415	45,247	12,222	5,662	6,139
France	170,569	167,919	271,953	287,976	164,478	507,516	450,780	95,096	91,823	90,743
Germany	63,574					26	4,118		12,573	5,480
Italy	59,579		91,265	95,510	78,340	111,058	192,513		18,398	30,802
Japan	3,885	1,782				12,070	21,579	35,692	6,839	21,820
Netherlands						32,233	90,942		12,396	12,625
New Zealand	60,517	61,257	38,136	28,518	17,129	47,520	132,492	36,831	17,565	34,413
Norway						7,798	13,825		1,852	4,153
Russia	141,129	53,551	32,764	177,519		1,392	4,862	1,111	12,787	5,399
Spain				25,198	9,287	25,962	50,540	56,010	16,944	17,093
Straits Settlements						15,265	53,706	25,547	7,635	18,293
Sweden						5,649	42,167		4,640	13,984
Switzerland	17,715	602				31,694	17,372		1,892	3,686
United States	49,249	17,826	20,448	10,922	4,422	5,330	26,009	35,569	9,032	5,251
Other Countries	134,635	131,709	157,875	99,876	65,928	102,998	275,924	390,312	103,511	203,586
Total	£1,061,307	£721,657	£842,536	£905,285	£476,185	£1,390,498	£2,346,114	£1,261,352	£603,626	£963,581

*Eleven months.

Belgian Exports, 1923*

	Cars and Trucks No.	Motorcycles No.		Cars and Trucks No.	Motorcycles No.
Argentina	27	....	Spain	37	....
Congo	....	39	Sweden	2	....
Denmark	....	46	Switzerland	185	49
France	32	339	United Kingdom	366	54
Germany	219	111	United States	52	4
India	40	....	Other countries	175	115
Italy	7	185			
Japan	....	58	Total	5,967	1,431
Netherlands	4,784	436			
Norway	13	....			
Portugal	28	....			

*Nine months.

Italian Car and Truck Exports

Year	Number	Year	Number
1912	7,266	1921	10,415
1913	6,575	1922	11,370
1914	3,291	1923 (6 mos.)	5,936
1915	2,485		
1919	2,547	Total	61,205
1920	11,320		

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The 1924 Statistical Issue

THE automotive industry has entered an era of intensive marketing. The keen fight for dealers and sales which got well under way last year will be continued in 1924. Statistical facts will be a more essential part of sales planning than ever before.

The 1924 Statistical Issue of AUTOMOTIVE INDUSTRIES has been planned specially to meet the need for more detailed and accurate merchandising data. Analysis of the dealer situation is a new feature included specifically for this purpose, while the production, specification, and export data all have been revised with a view to filling the immediate, practical needs of executives throughout the industry.

The extent to which these objectives have been achieved can be measured only by the usefulness of the issue to its readers. Every precaution has been taken to prevent errors from creeping into the tabulations. If mistakes are discovered, however, we shall be glad to have them called to our attention that they may be corrected in future compilations.

Let's Consolidate Our Position

AFTER an army in the field has made a successful advance it becomes necessary for it to stop and consolidate its position, bringing its lines of communication up through the terrain which has been won and constructing entrenchments from which to repel counter attacks.

Fundamentally, the strategy of business is not unlike the strategy of war, although, theoretically, at least, it is less ruthless. The commander of an army must determine when the time has come to stop and consolidate the positions won. The same decision must be reached now and then by business commanders.

Business retreated more or less rapidly along in 1920. Then its forces were rallied a year or so later and the backward movement was stopped. After a brief rest, when the fighting was along the same front, the legions of trade and commerce moved forward, slowly at first but with rapidly increasing momentum. All through 1923 the march ahead continued and the steady progress has not yet been stopped.

More ground can be won before the forces of reaction are strong enough to begin a vicious counter attack, but there are indications that the time is near when it will be wiser to stop and consolidate the ground already won than to continue the advance until it is stopped.

Business may be compelled to retreat sooner or later, but there will be no need for precipitate flight if it is firmly entrenched. History tells us that whenever it has overreached itself and penetrated too far into the enemy's country it has been compelled to retreat ignominiously. Disregard of all caution was responsible for the debacle of 1920.

It will be possible to avoid any such reverse this year unless the lesson learned then is disregarded. Production reached record levels in 1923 and it will be wiser to retain what has been gained than to strive for still greater heights and be forced to retreat.

The Plethora of Balloon Tire Sizes

NOTWITHSTANDING the fact that the tire industry has scarcely recovered from the serious financial losses it met in the depression which began in 1920, and is suffering from over-expansion, it has decided to add materially to its production costs by more than doubling the number of sizes of its products. In addition, it has provided dealers, already complaining about a paucity of profits, with another grievance. When balloon tires come into general use, dealers will be expected to stock the two dozen sizes produced in order to meet the needs of their customers.

It can be said, of course, that all the sizes agreed upon were demanded by manufacturer customers, but the difference in some cases are so infinitesimal that it is difficult to find any substantial reason for insistence upon them. Needless equipment and manufacturing costs will have to be passed on to the ultimate consumer unless tire makers' profits are to

continue so small that they are almost invisible to the naked eye.

After years of experience in the production of numerous sizes of tires the industry had about settled down to the use of some ten or twelve which met practically all needs. Nearly half of all the 128 phaeton makes and models now listed use either 32 x 4 or 32 x 4½ in. sizes. More than half of the remainder use either 31 x 4 or 33 x 5 in. sizes. About 15 per cent of the total use 30 x 3½ and 33 x 4½ in. sizes. Only six sizes, therefore, are sufficient for about 95 per cent of all models, including nearly all large production cars. The remaining 5 per cent use as standard equipment six sizes, of which four are regular cords and two balloons. Why, then, have 23 new sizes of balloon tires?

Balloon tires have come to stay and are wanted by users who fully appreciate their advantages and can afford the extra price which is charged at the present time. This does not, however, justify the automotive industry in demanding, if it has demanded, the numerous balloon sizes recently approved by the Rubber Association, nor does it justify the rubber industry for agreeing to produce this number. It has vastly complicated the tire manufacturing and service business, in addition to the adverse effect it undoubtedly will have upon tire prices.

If there ever was an example of the need for closer cooperation to prevent waste, not only between the tire and automobile branches of the industry, but among tire makers themselves, it is to be seen in the new list of approved sizes of balloon tires. It is time for heads of the industry to agree on some program which is economically sound and in the interest of all concerned. Tire company executives have not acted blindly. All of them seem to be quite well aware of the confusion and loss which is certain to follow their approval of nearly two dozen new sizes.

The tire industry itself must learn the lesson of cooperation before it can hope for the cooperation of its largest customer, the automotive industry.

Common Sense and Accidents

WHEN an industry starts out to cure the evils for which it is indirectly responsible, it must expect to be viewed, in the beginning at least, with more or less suspicion. That was the plight in which the National Automobile Chamber of Commerce found itself when it appointed its traffic safety committee. Before it could gain legislative support for any of its proposals it must demonstrate that it was not actuated by selfish motives.

That first and most difficult step was taken when George M. Graham, the chairman, declared at the annual highway conference, held at the University of Michigan, that not only should reckless motorists be sent to jail, but that their cars should be impounded by the police authorities for periods commensurate with the seriousness of their offenses, when they are convicted after a fair trial. This is a drastic remedy, but where the disease is serious heroic treatment must be applied.

Once recklessness in the highways is eliminated it will be possible to concentrate study on other accident causes and propose practical remedies. The percentage of reckless drivers is relatively small, and a short, sharp campaign should drive them off the streets and highways or bring them to their senses.

When this evil is abated it will be possible to view the accident problem from an unbiased angle. There is evidence that most of the attacks upon the puzzle up to this time have been aimed at the effect rather than the cause. Mortality statistics seem to demonstrate that pedestrians, who are the complainants, are more at fault than the motorists, who are the defendants.

Common sense can be applied to the prevention of accidents and Mr. Graham's committee seems to be doing it.

Consolidating the Motorists

WHOEVER is responsible for the apparently successful attempt to bring about a consolidation of the American Automobile Association and the National Motorists Association is entitled to the sincere thanks of the industry and of all motorists. The break in the ranks of the A. A. A. two years ago was unfortunate and it might have been averted if a spirit of conciliation had been apparent on both sides. It is gratifying that the wounds resulting from the strife since then promise soon to heal.

There is room for only one great national organization of motor car owners, and there is plenty of work for it to do. Abundant proof of this fact is to be found in the present excise tax situation. If the automobile owners of the country had begun six months ago a concerted campaign to have these discriminatory levies wiped out, there would have been no need for the eleventh-hour fight which is now being waged.

Interests of the automotive industry and the users of its products on big national questions are identical. Manufacturers and distributors of motor vehicles have adopted a broad-gage platform on these subjects, but the effort to have them adopted will be long and laborious without the support of motorists.

If success does not crown the effort to have excise taxes removed or reduced at this session of Congress, that work must be continued. There should be concerted and constructive action also on such vital subjects as the promotion of safety and uniform State traffic regulations.

Highway Common Carrier Taxes

THE United States Supreme Court, in deciding that the New York State law requiring taxicab operators in cities of the first class to file indemnity bonds is not unconstitutional, has laid down the principle that the streets belong to the city or State and that the use of them is a privilege rather than a right. The decision holds that their use by motor vehicles for hire is extraordinary and may be conditioned as the Legislature deems proper. This would seem to dispose of any lingering doubt that special taxes can be imposed legally on motor vehicle common carriers which transport passengers or freight.

Horizon Is Brighter for Repeal Passage

Outlook for Action on Parts and Accessories, and Possibly Trucks, Good

WASHINGTON, Feb. 20—The fight for the repeal of the automobile excise taxes was carried to the floor of the House this week.

In the Senate bills for relief of some of the taxes were introduced by Senators Copeland of New York and Edge of New Jersey. The Copeland bills are identical with the Clancy measures, while the Edge bill provides for repeal of the parts and accessories taxes.

The outlook for favorable action on the parts and accessories taxes and possibly a part of the truck taxes was characterized as "good" by Alfred Reeves, general manager of the National Automobile Chamber of Commerce, who has spent the last ten days in Washington, working in the interest of the measures.

Clancy Is Optimistic

Congressman Clancy declared that he is optimistic that the accessories, parts and truck tax repeal bills will be passed. "I believe our position is getting stronger every day, and before the fight is over we will undoubtedly be able to show results," he said. "There is no argument against the automobile excise tax repeal measures, and we are championing a just cause and, if not a complete victory, we will achieve a partial one and gain recognition that we have been discriminated against."

In addressing the House, Mr. Clancy said:

Our program for the fight here on the floor is reasonable. The automobile and truck owners paid out $146,000,000 last year on war excise taxes. We are asking a reduction of about $25,000,000. That is all. I recommend the reduction of the parts, tires, and accessories tax from 5 per cent to 2½ per cent. This cuts the tax in half. Forty million dollars was raised last year from this tax. To cut it in half gives the motorists $20,000,000 in relief. This reduction brings relief to all the 15,000,000 users of automobiles and trucks owned in the United States.

Wants Small Truck Repeal

I am going to fight for the repeal of the 3 per cent war excise tax on motor trucks of a capacity of 2 tons and under. I am not asking at this time for the repeal of the tax on the big, heavy motor truck which the friends of the railroad are fighting in Congress and which they claim gives a great deal of wear and tear on the public highways. I am asking for the repeal of the tax on the small trucks, which is the truck of the farmer and the truck of the grocer and the butcher and the merchant who delivers the necessities of life to your front door or your back door, according to your station in life. I am asking for the repeal of the tax on the produce and the food truck.

The repeal means the loss of only a small amount of revenue, considering the size of the budget necessary to run the country. It means approximately $5,442,900 loss in revenue, and yet it takes the war tax off 91 per cent of the trucks in use in the United States. This is one of the most indefensible of all Federal taxes. It is a tax on transportation, and Secretary Mellon says he is against transportation taxes. It is a tax on the distribution of the most simple and the most vital necessities of life.

By coincidence the opening gun on the floor of the House was fired by a veteran Congressman, eighty-three years of age, who, despite his wealth, has never owned and, until three years ago, had never ridden in an automobile. Congressman Isaac R. Sherwood of Ohio, the veteran representative, declared that the owners of automobiles were subject to more than

(*Continued on page* 489)

Business in Brief

NEW YORK, Feb. 18—Conditions remain irregular, made so by prevailing adverse weather conditions accompanied by price uncertainties. This is noticeable in the apparel trade, where, despite a slight improvement, business is not what it ought to be. There has also been a curtailment in Southern cotton goods, which seems to be extending.

In steel, iron, copper, lead and zinc considerable activity is apparent, which will increase in the spring when many building projects will be started. Backing this up, are reports of better than normal winter business in the material trade, including lumber, hardware, paints, brick and cement. Steel did better than iron in January in comparison with December, while gains approximating 10 per cent were reported in building expenditures and cement production.

From the Southwest, particularly in Texas, come reports of plenty of rain and with it good wheat and oats crop prospects. Cattle and range conditions are better than usual throughout the West, while Texas predicts a big cotton area. In southern California, dry weather has affected the citrus and walnut crops.

A particularly promising sign is that car loadings for the week ending Feb. 2, totaling 929,936 cars, is a gain of 38,610 over the preceding week and a record for any week in any February, exceeding the previous best, the first week of February, 1923, by 64,061. It also surpasses the best previous week of the year by 34,600.

Weekly bank clearings for the week ending Feb. 14 totaled $7,080,487,000, a loss of 18.3 per cent from last week. but 3 per cent better than the corresponding week a year ago.

In the market stocks rallied, then declined sharply, with bonds firm, money quiet and exchanges irregular.

New Company Plans to Build Mitchell

Material Has Been Ordered for Five Hundred Cars Similar to Present Model

RACINE, WIS., Feb. 19—The recently organized Mitchell Motor Car Co. has ordered material for the manufacture of 500 model F-50 Mitchell cars, according to a statement made here today by Robert G. Lay, secretary of the corporation.

Mr. Lay announced that the company has a plant here, but that it expects to move within sixty to ninety days, location at present unknown. The car to be manufactured is identical with that made by the old Mitchell Motors Co., whose affairs have been wound up under a receivership. Capitalization of the new company is reported by Mr. Lay as $250,000, all paid in.

It was stated also that the Mitchell Motor Car Co. would manufacture parts for Mitchell cars and be in a position to service the vehicles made by the old company. Mr. Lay denied that the Mitchell Motor Car Co. is in any way connected with the Standard Parts Co. of Detroit, or the General Parts Co., Flint, Mich.

L. H. Bridgman, a Flint banker, is president of the company, and Dallas E. Winslow, formerly connected with a leading maker of automobiles, is vice-president. Many of the old employees of the Mitchell Motors Co. are to be retained, it is said.

It is planned to distribute model F-50 through the old Mitchell dealer organization.

General Parts Corp. Formed

DETROIT, Feb. 18—The General Parts Corp. has been organized in Flint to take over the service on cars whose manufacturers have gone out of business. L. H. Bridgman is president and general manager; Dallas E. Winslow, secretary and treasurer, and Frank Lay, vice-president.

The company already is taking care of five lines of cars, including the Winton, Mitchell, Paterson, Crow-Elkhart and Liberty and the Standard Axle Co.

A statement issued by the company indicates that it will function purely as a service organization and is prepared to carry out the servicing of all cars of the makes named. It will not produce any cars, but will engage in manufacturing to the extent that its parts business requires. The buildings of the former Paterson company in Flint are being equipped as stockrooms.

Parts of the inventories of these former companies have been taken over as a nucleus for the service operations.

The service business of each of the companies mentioned was purchased as they were closed out, with the exception of the Liberty, which was purchased from the Columbia company following the receiver's sale of the Liberty company.

Fewer Working Days Will Curtail Output

But Average Number of Cars Made Daily in February May Set New Records

NEW YORK, Feb. 18—A gradual stepping up of automobile production schedules is noted, indications pointing to capacity operations in all major producing plants in March. Many of the chief producers already have reached top-speed activity. Total output for February will be affected to a great extent by the fewer working days for factory forces, but it promises to be well in excess of that reported for the same month of last year, with new records established for average daily production.

On the eve of the ushering in of the big buying season of the year, sales both at wholesale and retail are keeping at an exceptionally high level. Shows are producing business and stimulating interest, record attendance being reported in every instance. Orders by purchasers are being placed for immediate delivery. This is reducing dealers' stocks accumulated to meet the pressure of business after the real buying of the year commences.

Two of the pivotal shows have just been concluded, with conditions reported similar to those in other sections of the country. Kansas City reports the best selling show in years with a greater number of visitors than in the past, and returns from Minneapolis evidence the strong interest of the people of that section in motor cars.

Expect Active Selling Season

The industry is looking forward to an unusually active selling season, and is endeavoring through high production and steady shipments to distributors or to central points in distributing areas to forestall any shortage of cars when the demand comes. It is encouraging to producers to note the continued call for cars during a period when the retail demand usually has not picked up from the slack of winter, this condition naturally lengthening the heavy buying season.

Closed cars continue to hold their own in popular appeal, with the result that manufacturing schedules are still centered on the production of this type. Body builders have the situation well in hand so that from present indications it would appear that car manufacturing operations will not be impeded through lack of bodies as in previous years.

Material Cost Is Only One Factor to Be Considered by Agents in the Making of Purchases

AN INTERVIEW WITH J. S. O'ROURKE

Sales Manager of the J. W. Murray Manufacturing Co.,

By D. M. McDonald,

Detroit News Representative of the Class Journal Company

Detroit, Feb. 20.

PRICE is not necessarily the first consideration of the purchasing agent in the automotive industry, but it is one of a trinity of considerations—price, quality, service, all of which rank as a first consideration because one or two without the other have no place in the life of a purchasing man and cannot be given serious thought.

This sums up an opinion by J. S. O'Rourke, sales manager of the J. W. Murray Manufacturing Co., when asked if he thought that the prices being paid in the industry to manufacturers of material and parts were detrimental to the welfare of supplying companies because of competitive conditions. Undoubtedly, he said, prices are no higher than absolutely warranted by costs and it is not to be expected that they should be.

The average purchasing man, though of necessity somewhat cold-blooded, knows just about what he should be paying for his supplies and is open to fair prices. By making part of their requirements themselves, companies in the industry know what they should pay to outside manufacturers and will do business only on that basis.

No company in the industry is seeking purchases which do not permit of a profit to the supply source because it is obvious that no progress can be made on that basis and no reliance can be placed in the continuance of supply from a source which is not making money. With manufacture on a production basis and reliant on a constant and reliable supply of parts, manufacturers cannot afford to take chances on their schedules being halted suddenly through failure of the source.

Deliveries on schedule are just as important to the industry today, and probably more so than price, Mr. O'Rourke said. All factories are working on monthly releases, carrying comparatively no inventory, and for that reason have to be assured of the parts or material maker being able to deliver on the dot.

Prices which do not permit of a profit cannot be justified over any period of time, Mr. O'Rourke said, and certainly are not warranted when business generally is good. Where there is a condition of only limited business, factories may be excused for going out after business which will enable them to keep their organizations together or reduce losses on overhead which otherwise would be high, but then or any other time it is just a question of how long resources can stand the strain.

Regarding the outlook for business during the year, he said manufacturers were not only equalling the heavy schedules outlined in the late part of last year, but were finding demand running in excess of these. Throughout the car manufacturing group, he said, there is no question now that the first six months of the year will be the largest production months the industry has known.

Reports from parts-making areas show high operations, in keeping with the general onward movement in the car and truck-producing field. Capacity activities are the rule in parts plants. Tire makers are advancing schedules and truck builders are experiencing a wholesome demand.

Motor Wheel Net Income Reported as $1,292,282

DETROIT, Feb. 19—The Motor Wheel Corp. shows net income of $1,292,282 after Federal taxes in its annual report for 1923. This is equivalent to $2.56 a share, $10 par, earned on the common.

The balance sheet shows total assets of $13,854,226, of which $711,522 is on the cash account. Net profit was $1,473,282, against $791,769, while preferred dividends amounted to $160,302 and common $355,712, leaving a surplus of $776,268.

Adams Company to Make Both Engines and Brakes

NEW HAVEN, CONN., Feb. 20—W. Lawson Adams has formed the Adams Motors Corp., taking over a plant on Hamilton Street, this city, for the manufacture of the Adams twelve-cylinder engine and the Adams four-wheel brake.

Mr. Adams is president and chief engineer of the new company, which is capitalized at 500,000 8 per cent preferred shares and 500,000 shares of common. He was formerly president of the Advanced Motors Corp., from which position he resigned this month.

DATE SET FOR FOX SALE

PHILADELPHIA, Feb. 20—The plant of the Fox Motor Co. is to be sold in piecemeal lots Monday, March 24. The sale will include real estate, machinery, good will and patents and service rights.

Moskovics Becomes Franklin Executive

His Efforts Will Be Devoted to Directing Merchandising End of Business

SYRACUSE, N. Y., Feb. 18—Fred E. Moskovics has been elected vice-president of the Franklin Automobile Co. and will devote his attention to the merchandising end of the business. Mr. Moskovics, transplanted from Indianapolis, took possession of his new office Saturday and at once started to map out an extensive selling campaign.

Mr. Moskovics returns to the automobile end of the industry following his resignation in November as vice-president of the Nordyke & Marmon Co. of Indianapolis, with which he was identified for many years. Since his resignation he has been receiver for the Stevenson Gear Co. of Indianapolis, which post he will also continue to fill.

Since he came into the automobile industry from the bicycle era, Mr. Moskovics always has been a prominent figure. He was the first sales manager of the American branch of the Continental Tire Co., later becoming president and general manager of the Allen Kingston Motor Car Co.

He discovered Ralph De Palma and started him out on his racing career at the wheel of an Allen Kingston. He followed this by becoming secretary-manager of the Bristol Engineering Co., and previous to his Marmon connection ten years ago he served as sales manager of the Remy Electric Co.

International Harvester Buys E.-B. Tractor Plant

MINNEAPOLIS, Feb. 20—The International Harvester Co. has bought the tractor manufacturing plant of the Emerson-Brantingham Co. and site here for a motor truck distributing and service point and eventually an assembly station. The Emerson-Brantingham company will continue its activities at the main plant in Rockford, Ill.

The International company gets a site of 7¾ acres and 150,000 square feet of floor space. It will have here its largest service and distribution plant in the Northwest. The company already has a branch house in the city and a warehouse in the St. Paul midway. Alterations and installation of machinery will begin at once, according to Vice-president G. A. Ranney.

COOPERATES IN DATA BOOK

NEW YORK, Feb. 18—The Asbestos Brake Lining Association has decided to cooperate in the publication of the Standard Data Book, which contains current statistics relating to the sizes of brake linings and clutch facings. This will affect a saving of approximately $15,000 a year in the reduced cost of the books. One central clearing house will obtain, revise and compile all of the data and one firm will publish the book.

JAPANESE COME HERE TO MAKE BUS STUDY

CHICAGO, Feb. 21 — Ryoze Yanagida, representing a group of Japanese capitalists; T. Acki, engineer connected with the Imperial Commercial Museum, and Frank K. Shibata of San Francisco and Tokio, are in the country investigating motorized transportation systems, the plan being to replace, for the most part, street car systems in rebuilding Tokio with motor vehicles.

One of Mr. Yanagida's first acts was to contract for a fleet of 100 Yellow cabs with the Yellow Cab Manufacturing Co. of this city.

Creditors of National Seek Ruling on Priority

CINCINNATI, Feb. 19—Judge Smith Hickenlooper has ruled that machinery of the National Motors Corp. will not be considered as part of the general stores and will not be subject to sale for the benefit of creditors. Bondholders under the ruling will receive the benefit of the sale of the machinery and creditors will not be able to attach the lathes, drill presses, etc., to satisfy their claims.

Notwithstanding this opinion, creditors are continuing their fight to obtain priority on their claims. The marshal's sale to satisfy the $35,000 judgment conducted by Louis Ruthenberg, former president of the corporation, brought $28,877 which was the balance turned into the court registry after payment of certain charges.

The proceeds of the sale will not be turned over to Mr. Ruthenberg, however, until other creditors have an opportunity to file any further actions they may desire. After the deduction of certain expenses $26,245 will be paid eventually to the attorneys for Mr. Ruthenberg.

Mortgage and general creditors of the National Motors Corp. in two separate actions filed in Federal Court recently sought to stop the sale, but without avail.

Motor Wheel Organizes Balloon Tire Department

DETROIT, Feb. 18 — Motor Wheel Corp. has organized one department of its Harvey, Ill., unit for the production of disk wheels for balloon tires to meet the demand for replacement wheels from owners.

The demand for balloon tire equipment has developed in unlooked for volume since the New York and Chicago shows, officials declare, and there is a decided movement among car owners to use balloon equipment. This is especially marked among owners of large cars.

Trustees to Handle Dorris Dissolution

Court Sees Better Results from That Action Than Through Receivership

ST. LOUIS, Feb. 19—In ordering the dissolution of the Dorris Motor Car Co. and disposition of its assets for the benefit of stockholders, Circuit Court Judge Frey stated that in these days of keen competition it seems almost impossible to manufacture automobiles on a profit-paying basis without large capital and extensive advertising, and that no receiver could get the amount of money necessary to do this. It was also maintained that a receivership would be a further drain on the stockholders of the company.

By the decision, which came after a trial lasting a week, the application of H. B. Krenning, one of the founders of the company, which is the oldest motor car manufacturing concern in St. Louis, was granted, and the petition for a receivership filed by Webster Colburn and E. J. Scott was denied. Mr. Krenning owns $100,000 worth of the preferred stock, and many stockholders concurred in his application for dissolution.

Suits Filed Last Fall

Suit for dissolution of the company was filed in the Circuit Court last fall after a resolution to that effect was passed by the board of directors. Some stockholders, however, headed by Mr. Colburn, who was then manager of the company, applied for a receivership, asserting that Mr. Krenning and others were attempting to dissolve the company because it was to their own advantage to do so and detrimental to the holders of common stock.

In his decision, Judge Frey stated it was clear from evidence submitted that Mr. Krenning had made business trips at his own expense and without charging any commission, while Mr. Colburn requested as manager of liquidation a salary of $10,000 a year and had received commissions repeatedly.

Business Reported Unprofitable

"Krenning has made efforts to bring the business on a profit-paying basis," the decision states. "The business has been unprofitable to its stockholders since 1916, and dissolution is the best method at present to sell the assets, so that they may bring a fair return to the stockholders."

The liquidation of the concern will be in the hands of trustees to be appointed by the board of directors of the company.

Mr. Krenning is entitled by the dissolution to $147,000, but voluntarily reduced his claim to $117,000 should the stockholders agree to the dissolution.

The firm was founded in 1902.

C. M. Hall Increases Its Current Assets

Ratio of 13 to 1 to Current Liabilities Shown in Year's Balance Sheet

DETROIT, Feb. 19—In its balance sheet as of Dec. 31, C. M. Hall Lamp Co. shows increases in current assets and surplus in comparison with its former year. Total assets now are $1,849,753, an increase from $1,690,898, and current assets of $1,272,455 compare with current liabilities of $95,516, in ratio of over 13 to 1. Net working capital is $1,176,939. At the end of the former year current assets were $1,150,548; current liabilities, $128,292, and working capital, $1,020,256.

Under current assets are cash, $11,802; United States treasury certificates, $300,000; United States Liberty Bonds, $50,000; municipal and other bonds, $245,770; accounts receivable, $1,088,638; bills receivable, $6,010; accrued interest, $7,649, and inventories, $462,583. Inventories show an increase of about $20,000. Current liabilities comprise accounts payable, $36,834, and Federal taxes accrued and not yet due of $58,681.

Fixed assets, after writing off $345,311 depreciation, are valued at $569,195, against $534,843 in 1922. Surplus representing the book value of 200,000 shares of no par value is $1,754,237, contrasting with capital stock and surplus of $1,562,605 at the end of 1922, when capital stock consisted of 100,000 shares of $10 par value. The company has no funded debt or bank loans, and patents and good will are carried at $1.

Stewart-Warner Reports Net Profit of $6,728,119

CHICAGO, Feb. 18—A net profit of $6,728,119, after depreciation, for the year 1923 is reported by the Stewart-Warner Speedometer Corp. This is equivalent to $14.16 a share earned on 474,980 shares of no par stock, against $5,335,162, or $11.23 a share, on 474,800 shares outstanding in 1922.

The income account shows net earnings of $7,586,499, from which is deducted $858,380 for Federal taxes, as against $6,019,725 in 1922, with $684,563 for taxes. Dividend requirements were $3,528,259, against $1,643,138, leaving a surplus of $3,199,860, against $3,692,024. The profit and loss surplus was $13,556,824, against $11,098,312.

The consolidated balance sheet shows the following:

Assets—land, buildings, machinery and equipment, $6,229,801, against $5,634,207; patents, good will, trade-marks, etc., $10,805,557, compares with $10,778,795; cash, $955,495, against $1,011,290; securities investments, $1,222,268, contrasted to $81,597; accounts and notes receivable, $2,843,322, against $2,688,043; inventories, $2,843,176, against $2,909,700 and deferred charges, $427,935, against $88,585.

Liabilities—Capital stock, $12,467,619, against $12,461,505; accounts payable, $557,856, compared to $434,482; taxes, royalties, etc., accrued, $741,998, contrasted to $725,750, and surplus, $13,556,824, against $11,098,312.

DEALER USES VESSEL FOR SHIPPING FORDS

NEW YORK, Feb. 18—Transford No. 2, formerly the ocean going oil burner Aquidaban, has been put into commission by a dealer, Dutee W. Flint, representing the Ford Motor Co., for the entire State of Rhode Island, and New Haven and Fairfield counties in Connecticut.

The regular trip for this automobile transport is between Kearny, N. J., where a branch plant of the Ford company assembles 240,000 cars yearly, and Providence, R. I., and New Haven, Conn.

The boat is 256 ft. long, has a speed of 12 m.p.h. and on her maiden trip carried 200 Fords, assembled on wheels, parked in the hold much the same as in a garage.

Net Sales of $3,156,393 Reported by Auto-Body

DETROIT, Feb. 18—The annual report of the Auto Body Co., Lansing, submitted to stockholders at the annual meeting this week, shows that the company made net sales of $3,156,393 during the fiscal year, with a net profit after all deductions of $89,201. This, it was said, was the best showing the company has made since 1920. Operating profit was 6 per cent on sales and 10 per cent on capital invested.

All directors of the company were reelected, these being F. N. Arbaugh, E. S. Porter, Harris E. Thomas, Richard Price, W. V. C. Jackson, F C. Ruch, John W. Haarer, A. C. Stebbins and C. E. Bement. Directors will meet next week to elect officers. In a statement at the meeting W. V. C. Jackson, general manager, stated that the outlook for business was better than in 1923. The company is making changes in its equipment which will increase its capacity and permit of operating economies.

Trippensee Closed Body Earned $243,793 in 1923

DETROIT, Feb. 18—Net earnings of the Trippensee Closed Body Corp. for 1923 were $243,793, which is at the rate of 14.6 per cent on outstanding stock. The report shows a surplus of $551,947 and book value on stock of $13.80 a share.

Directors of the company were elected as follows: Frank J. Trippensee, R. S. Everitt, G. D. Everitt, B. J. Oades, R. E. Routier, A. J. Stock and F. A. Chapper. Officers were elected as follows: F. J. Trippensee, president; B. J. Oades, chairman of board; R. S. Everitt, vice-president, and G. D. Everitt, secretary and treasurer.

$5 Share Reported Earned by Federal

Profits of Truck Company in 1923 Increased 173 Per Cent Over Previous Year

DETROIT, Feb. 18—The Federal Motor Truck Co. had an exceptionally good year in 1923, second only to 1919, whose record was closely approached by the net profits, before Federal taxes, of $1,102,130 reported in the annual statement of last year's business. This profit is 173 per cent in excess of 1922. Federal taxes are estimated at $110,000, not all of which is applicable to the year's earnings.

The net, after taxes, is approximately $1,000,000, equivalent to about $5 a share on the 200,000 shares of $10 par capital stock outstanding.

There was an increase of 56 per cent in sales volume in 1923, the total showing $7,496,824, compared with $4,810,587 in the preceding year.

Cash dividends amounting to 10 per cent were paid last year on the $2,000,000 capital stock outstanding, the stock now being on a 12 per cent basis.

The company's balance sheet as of Dec. 31, 1923, shows as follows:

Assets: Cash, $263,234; accounts receivable, $980,020; land contracts receivable, $630,164; investment, $279,727; inventories, $1,818,923; plant account, $1,361,898 and deferred charges, $23,531.

Liabilities: Accounts payable, $198,215; bills payable, $225,000; dealers' deposits, $24,415; accrued expenses, $64,870; land contracts payable, $68,760; reserve for depreciation, $988,100; branch investments, $80,749; capital stock, represented by 200,000 shares $10 par, $2,000,000, and surplus, $1,707,438.

Common Dividend Declared by C. G. Spring & Bumper

KALAMAZOO, MICH., Feb. 15—A dividend of 50 cents a share, the first paid on the common stock of the company, has been authorized by the C. G. Spring Co., and checks have been mailed to the stockholders, according to J. J. Jennings, treasurer of the concern.

Stockholders, at a special meeting here, voted to authorize the issue of ten shares of preferred stock of $10 each for each $100 share now outstanding, also to issue 1,750,000 shares of common stock for the 150,000 shares of common now in force. At the same meeting the official name of the corporation was changed from C. G. Spring Co. to C. G. Spring & Bumper Co.

More than 96 per cent of the common stock was represented at the meeting. The vote was unanimous for the changes made.

The C. G. Spring & Bumper Co. is now in the fourth year of its existence. For its third year it was able to report gross sales of $3,600,000, with profits in excess of $300,000.

Associations Plan to Start Test Case

They Want to Know How Far They Can Go in the Gathering of Statistics

WASHINGTON, Feb. 19—A test case is being planned by certain trade associations to clear up their rights to gather statistics relative to their business, Attorney General Daugherty has announced. The Department of Justice, however, is withholding the names of the organizations who have informed the Department of their contemplated action in solving the mooted question as to whether or not they can or cannot legally gather statistics except at the request of the Department of Commerce.

Not until the courts definitely define the rights of associations will any progress be made in perfecting and expanding the existing machinery for the scientific study of business, the associations have advised the Department of Commerce.

There are a number of cases pending before the courts involving the legality of gathering statistics by trade associations. But they are all complicated by other questions, and particularly by the charge that such statistical organizations are devised for circulating agreements about prices. If the right of trade bodies to engage in legitimate statistical studies is to be tested, then a clear-cut case, unmixed with these other issues, must be made. This is the reason for the test case which is proposed.

To Continue Monthly Survey

Without expressing an opinion as to the legal status of trade association activities, questioned in certain regards by Mr. Daugherty, the Department of Commerce has announced that it will continue to publish its monthly survey of current business in connection with which it has been receiving information and statistics from various associations.

The Department will continue to request trade associations to furnish "such statistics as may be necessary or convenient for its purpose," according to an announcement.

Officials declare that the recent correspondence between Secretary Hoover and Mr. Daugherty relative to the legality of the collection, compilation and distribution by trade associations of statistics of general information on business has caused widespread discussion. Mr. Hoover believes that barring of the collection and distribution of statistics by trade associations would be a severe blow to the small business man.

ELECTED REYNOLDS DIRECTORS

JACKSON, MICH., Feb. 20—Thomas B. Neal of Chicago, vice-president of the Central Trust Co., and Arthur B. Westervelt, vice-president of the American Trust Co. of New York, have been elected directors of the Reynolds Spring Co.

RAILROAD CAN DROP NON-PAYING LINES

WASHINGTON, Feb. 18—A decision handed down today by the Supreme Court is of interest to manufacturers of motor buses and trucks, for it opens a way for the further development of railroad participation in motor transport. Under this ruling railroads will be permitted to discontinue non-paying branches, thus making it possible for truck and bus builders to interest them in substituting motor vehicles for non-paying rail transport.

The case was that of the State of Texas against the Eastern Texas Railway to restrain the carrier from abandoning its line as to intra-state traffic and the counteraction brought by the carrier against the State to prevent threatened interference by the State authorities. The carrier had won in both instances before the lower court.

The court upheld the right of a railroad corporation to dismantle its line and discontinue its service on the ground that further operation would result in financial loss.

Worthington Scranton Named Head of Maccar

SCRANTON, PA., Feb. 19—Philo Butler and L. H. Conklin have been added to the board of directors of the Maccar Truck Co. with the election of Worthington Scranton as president and R. H. C. Rupp and B. A. Guy as vice-presidents. An executive committee composed of several members of the board will direct the affairs of the company with the counsel of an advisory committee composed of prominent bankers and manufacturers.

Mr. Guy, who has been named general manager, has had a long and successful experience in the automotive industry. His previous associations have been with the Garford Motor Truck Co., Curtiss Airplane and Motor Co. and International Motors.

Mr. Rupp will be left free to devote his attention to sales promotion and financing.

New Factory Advances Output of Flint Cars

NEW YORK, Feb. 19—Through the opening of the new Flint plant at Flint, the production of this unit of Durant Motors has been stepped up and now is reported 33 1/3 per cent since Dec. 1.

Previous to that date the eastern plant at Long Island City was in quantity production, but the new plant at Flint was just entering that stage. The January increase in production over December was 17 per cent, but a further increase was made.

Standard to Handle Ethyl Gas in East

General Motors Corp. Negotiating Contract with New Jersey Oil Company

NEW YORK, Feb. 18—Under a contract which is being negotiated between the Standard Oil Co. of New Jersey and the General Motors Corp., the former will act as distributor in the eastern part of the United States for ethyl gas, the anti-knock mixture developed by the General Motors Research Corp. at Dayton.

As soon as the necessary arrangements can be made, the Standard Oil Co. of New Jersey will carry ethylized gasoline at its own filling stations and also will supply it to other petroleum marketing companies, which at the option of the purchasers will add ethyl in the correct proportion to gasoline supplied.

Ethylized gasoline now is being marketed in Chicago, Cincinnati, Pittsburgh and other places in the Middle West. Gasoline with the ethyl fluid added sells for 3 cents a gallon above current gasoline prices.

It is understood that General Motors will install ethylizers on the gasoline pumps of the oil companies, so that motorists can buy their gasoline either plain or ethylized. This ethylizer will be a glass container with measuring equipment attached to deliver the proper quantity of ethyl required for the amount of gasoline purchased. This will be a preliminary step, for if the mixture proves as popular as expected, the ethyl will be mixed with the gasoline at the refineries.

Peerless's Net Profit Last Year Was $706,469

CLEVELAND, Feb. 18—A net profit of $706,469 after taxes and charges was made through the operations in 1923 of the Peerless Truck & Motor Corp. This compares with $1,005,113 in 1922. The corporation's balance sheet as of Dec. 31, 1923, shows current assets of $5,765,916 and current liabilities of $636,342, including accruals.

It also is reported that the funded debt has been wiped out and that there are no bank loans. Through the resetting of the balance sheet early in the year more than $2,800,000 appearing as good will was wiped out, and the property account written up to $5,659,102. Inventory has been reduced from $5,758,033 to $3,937,405. Capital stock totals, $6,327,560, and surplus, $4,682,780.

HERSCHELL-SPILLMAN SALE

NORTH TONAWANDA, N. Y., Feb. 19—A public sale of the plant, land, equipment and inventory of the Herschell-Spillman Motor Co. will be held March 7 under the direction of H. D. Wilson, trustee.

Price Differential Is Becoming Smaller

Most Increases That Have Been Made Recently Affect Open Model Lists

NEW YORK, Feb. 18—Recent minor price increases on several lines of cars are not considered especially significant. They have been dictated by necessity rather than desire. It is well understood both within and without the industry that manufacturers are operating on slender profit margins. The present trend of commodity prices is upward, and if it continues in this direction, additional insignificant price readjustments may become necessary.

Practically all recent advances have been on open models. This indicates that production is swinging even more strongly toward closed jobs in accordance with the demands of the public. As the output of closed cars rises and the production of open models declines, it becomes necessary to readjust the differential, and it gradually will become smaller and smaller.

Prices which have prevailed on open models for the last year or two were fixed when these types constituted a larger percentage of the total output.

The industry is thoroughly convinced that the remarkable prosperity it has enjoyed has been due in large measure to the fact that it has been giving better values than ever before, and it has no intention of changing its policy in this respect. Whatever increases are made will be merely to meet higher manufacturing costs.

Dodge Increases Prices $15 on Some of Its Cars

DETROIT, Feb. 21—Effective immediately Dodge Brothers announces a $15 increase in price on certain of its new models. The regular roadster, phaeton, sport roadster and phaeton and also the screen commercial delivery are the models effected.

All closed cars remain at their regular price. The new list is as follows:

	Old Price	New Price
Roadster	$ 850	$ 865
Phaeton	880	895
Sport Roadster	1,045	1,060
Sport Phaeton	1,045	1,060
Screen Commercial	965	980

Gray Motors Advances Price of Closed Cars

DETROIT, Feb. 20—The Gray Motors Corp. has advanced the prices of its closed models $15 and $20, the coupé and sedan now listing and $750 and $895, respectively.

Both the standard and sport phaetons remain at $630 and $720. An advance of $20 has also been made on the commercial chassis, which now sells at $595.

MORE TIME ALLOWED TO FILE TAX RETURN

WASHINGTON, Feb. 19—Automobile manufacturers and other domestic corporations have been granted an extension of time in the filing of their internal revenue tax returns, the Internal Revenue Bureau announces. The original filing date was March 15, but under the ruling of the Bureau the time has been extended to June 15 for the filing of all domestic returns.

Representation had been made by many concerns that they could not complete the preparation of returns in time to file with the Bureau by March 15.

The following table shows the new schedule:

	Old Price	New Price
Phaeton	$630	$630
Sport Phaeton	720	720
Coupe	735	750
Sedan	875	895
Truck	575	595

Prices on Open Models Advanced by Studebaker

SOUTH BEND, IND., Feb. 18—The promise that President A. R. Erskine of the Studebaker Corp. made to his dealers at the banquet during the Chicago show that the differential between open and closed models would be decreased is partly carried out in the announcement made today of price increases on open models in the Light Six and Special Six lines without disturbing prices on closed jobs.

The list on the open models and chassis has been advanced $50 on the Light Six and $75 on the Special. The Big Six line is not affected at all by the announcement.

The Studebaker list now is as follows:

	Old Price	New Price
LIGHT SIX		
2-pass. open	$975	$1,025
5-pass. open	995	1,045
Chassis	845	895
3-pass. coupé	1,195	1,195
5-pass. sedan	1,485	1,485
5-pass. sedan (special)	1,395	1,395
SPECIAL SIX		
2-pass. open	1,325	1,400
5-pass. open	1,350	1,425
Chassis	1,100	1,175
5-pass. sedan	1,895	1,895
5-pass. sedan (special)	1,985	1,985

Railway Would Cut Fare to Meet Bus Competition

DETROIT, Feb. 18—Detroit United Railway Lines have requested permission from the Michigan Public Utilities Commission to make lower fares effective on some of its lines March 1. It is understood that the decreases are intended to meet bus competition, the same steps having been taken on other routes several months ago with the sanction of the commission.

Michelin Announces Clincher Balloon Tire

Is Termed 31 x 4.40, a Size That Has Been Approved by Rubber Association

MILLTOWN, N. J., Feb. 18—What is believed to be the first clincher balloon tire to be marketed in this country has been announced by the Michelin Tire Co. This tire is designed to replace 30 x 3½ in. tires and is termed 31 x 4.40, which is one of the sizes approved by the Rubber Association, although no mention of a clincher tire is included in the Association's recently published list of sizes.

The new tire is a true balloon tire in that it has a thin wall and is designed for low inflation pressures. In the case of the Ford car with average load, the recommended inflation pressure is 20 lb. on front wheels and 25 lb. on rear wheels.

Deliveries of this tire are now being made from all branches of the Michelin company. The price is said to be slightly less than that of the Michelin oversize cord for the same 30 x 3½ in. rim. Tread design is similar to that formerly used on Michelin oversize cords.

In general design the new tire is based on Michelin experience in France, where balloon clinchers in a variety of sizes have been in successful use for several months. It is claimed that these tires not only give a greater mileage than ordinary cords which they replace, but that they increase materially the life of the car on which they are used.

Dodge Turning Out Models with 6-Ply Balloon Tires

DETROIT, Feb. 19—Dodge Brothers is now in production on the line of special models on balloon tires first displayed at the New York show, the new models including roadster, phaeton, four passenger coupé and sedan. Prices on the line have been set at $1,025, $1,055, $1,535 and $1,545 respectively.

With these the Dodge Brothers passenger car line now consists of ten models, with a price range from $865 to $1,545.

In a formal announcement of the special line, the company declares that there is a distinct demand, especially in metropolitan centers, for a type of car with more complete equipment than that carried by the standard types.

In handling the special equipment, the company declares that it has been careful to introduce only such features as will increase the beauty and comfort of the standard types, without reacting unfavorably on Dodge cars in the used market.

As balloon tire equipment the company is using six-ply 5.77 inch types, which it contends embodies features which make it superior to the balloon tire equipment adopted as standard by the trade, chiefly because it is believed to give the air cushion effect in riding and a longer life with less possibility of puncture.

Service Convention Dated for May 19–22

Exposition Will Be Held at Same Time—N. A. C. C. Now Preparing Program

NEW YORK, Feb. 21—The National Automotive Service Convention and Maintenance Equipment Show will be staged in Detroit May 19 to 22 by the service division of the National Automobile Chamber of Commerce. For several years the division has been holding service conventions in November and May each year, these usually lasting three days. The May convention this year is to be vastly increased both in scope and size.

Invitations are to be sent to service men or those interested in service throughout the country to attend the convention, which will last four days. Sessions will be held each afternoon, beginning Monday. In connection with the convention there will be an exposition by service equipment manufacturers of service station tools and equipment in actual operation. This exposition will be open to delegates to the convention during the morning and evening.

Transport Congress at Same Time

Both the convention and show will be held in the General Motors Building, and with the facilities for meetings, meals and so on, it will be possible for the delegates to spend a great deal of time actively participating and without loss of time going from one place to another.

The Motor Transport Congress also sponsored by the N. A. C. C., will be held May 21 to 24, so that the foreign delegates will have an opportunity to look over modern service station equipment as displayed at the show.

The total exhibition space available is about 39,000 square feet, which should net about 30,000 square feet for actual display purposes.

The entire service convention and show will be under the general direction of the N. A. C. C. service committee, of which F. A. Bonham is chairman. S. A. Miles, manager of the New York and Chicago automobile shows, will have charge of the show section, and activities are already under way in laying out the spaces and preparing to assign them.

Tentative Program Arranged

A tentative program of subjects has been selected for the convention session, these including service station personnel, actual service work on certain parts of the car, flat rates, accounting systems, shop layouts, electrical service and selling service. Already several big men in the service field have accepted invitations to handle some of these subjects, and a final program and list of speakers will be announced in a few weeks.

In addition to Mr. Miles, the show committee will consist of M. L. Heminway, general manager of the Motor and Accessory Manufacturers Association, and S. D. Black, representing the Automotive Equipment Association.

U. S. CHAMBER WANTS SAFETY CODE FOR AIR

WASHINGTON, Feb. 19—Legislation providing for an aeronautical safety code, which is declared to be essential to the development of commercial aviation, has been recommended to Congress by the transportation department of the Chamber of Commerce of the United States. The United States is the only country of any importance which does not have such a code.

In a statement sent to each member of Congress, the Chamber of Commerce declares that it will support "suitable legislation to govern the flight of aircraft and the airways over which they operate, thus encouraging aviation in the development of new services to commerce and as an important means of defense."

"Given this," it says, "the designation of air routes and the assignment of air terminals will naturally follow. Such legislation will not only make for greater safety in flying by eliminating the irresponsible element, but should tend to stimulate commercial aeronautics in all its phases."

Motor Truck Industries May Promote Big Exhibit

DETROIT, Feb. 20—Plans for a general meeting of Motor Truck Industries, Inc., composed of manufacturers of specialized unit trucks and allied parts manufacturers, are being worked out by William N. Hallanger, newly appointed manager of the association, at which a program for association activity during the year will be outlined. The date and place of the meeting will be announced later.

Mr. Hallanger, who took over the work of the association this month, has been in Detroit about a year, during which time he has been vice-president and general manager of the J. W. Burton Co., stamping and sheet metal manufacturer. Before coming to Detroit he was connected with several banking and industrial companies in Chicago and Milwaukee.

He is now located in the offices of the association in the Capitol Building, this city. It is his plan that the general meeting be the starting point for a series of activities to promote the welfare of specialized truck makers, one of the features of which will probably be a big industrial truck exhibit which the association has had under consideration for some time.

5-Ton Truck to Test Pneumatic Tire Use

Long Distance Trip Will Be Staged in Order to Demonstrate Their Value

NEW YORK, Feb. 18—A five-ton Mack truck fitted with Budd-Michelin disk wheels and Michelin 38 by 7 in. pneumatic tires, singles in front and duals in the rear, will start on a demonstration run from New York to Akron, Ohio, on Saturday, Feb. 23. The demonstration is being made by the Budd Wheel Co., the object being to give ocular proof of the efficiency of pneumatic tires on heavy trucks in long distance transportation.

While large trucks have been equipped with pneumatic tires in an experimental way a number of times in the past, this is believed to be the first time that a popular demonstration of a truck of this capacity with dual pneumatic tires and disk wheels has been made in this country.

In the past one of the objections to dual pneumatic rear tires has been that they were usually used in conjunction with front tires of different size, which necessitated the carrying of two different sizes of spare tires. In the installation here referred to both the front and the rear tires are of the same size.

Straight Side Types Used

The tires with which this truck is fitted are of the straight side type and the rims are the Firestone Model B, which have detachable side and locking rings. The wheels are demountable at the hub. Only a moderate inflation pressure, namely, 95 lb. per sq. in., is carried, which overcomes some of the objections to the high pressures usually required with the so-called giant tires. The total load of truck and load is 24,600 lb.

Some tests have been made by the Budd Wheel Co. on the effect of deflation on one of the tires. It has been found that if, owing to a puncture or some other cause, one of the tires becomes deflated, the width of the contact surface between the other tire and the ground increases only 11 per cent, and the tire makers advise that the trip can be continued to the tire station or to the end of the line in the case of a bus on the remaining single tire without injury to that tire.

STUTZ ADOPTS FLAT RATES

INDIANAPOLIS, Feb. 18—The Stutz Motor Car Co. has introduced the flat rate charge system into every Stutz service station in the country. This step was decided upon after six months' intensive study and actual work at the factory. On the Special Six engine alone 430 operations were performed by three grades of mechanics in order to determine the average amount of time the various operations consumed.

Smaller Tire Makers in Optimistic Mood

Star Rubber Reports Gain in Business—News Notes of Other Organizations

AKRON, Feb. 19—Smaller companies during the past week have issued comparatively optimistic reports regarding the past year's business, present operations and prospects for the future.

The Star Rubber Co. reports that business for the year just closed amounted to $1,617,046, an increase of $102,684 over the business reported for the previous year. Operations of the company are understood to be approximately 500 tires a day, most of which are said to be cords. The company states that despite low tire prices operations are showing some net profit at the present time.

Standard Tire & Rubber Co. production at Willoughby is reported to be in the neighborhood of 450 a day, while the Falls Rubber Co. is reported to be making approximately 500 tires a day.

Northern Rubber Co., which purchased the former Biltwel Rubber Co. plant at Barberton last year, announced that L. J. Schoot, organizer of the company, has been re-elected president. P. H. Snyder of Massillon has been re-elected vice-president and treasurer, and Owen Moynihan, secretary.

Litigation looking toward confirmation of the sale of the former Excel Rubber Co. plant at Wadsworth to the Studebaker-Wulf Co. of Marion, Ohio, has been completed and sale has been confirmed with the result that the company expects to start production of tires in the plant in the very near future. The Excel property was purchased for $92,000.

Nash Will Get Mitchell Factory First of March

MILWAUKEE, Feb. 18—Possession of the real estate and buildings of the defunct Mitchell Motors Co. at Racine, Wis., will be given the Nash Motors Co. of Kenosha and Milwaukee on March 1, according to an announcement by Herbert F. Johnson trustee. This announcement offers for sale the machinery, tools and other equipment which remain in the plant, and which were not included in the purchase by Nash for $405,000 on Jan. 28.

It is estimated that between 60 and 70 per cent of the Mitchell equipment was sold to manufacturers and dealers in tools at the public and private sales held prior to the offering of the bare buildings and land. The remaining equipment includes lathes, screw machines, drill presses, multiple drills, grinder, gear cutters, milling machines, turret lathes, etc.

Nash has made no further statement with respect to the purposes to which it will put the Mitchell plant, beyond the original announcement at the time the purchase was effected that it would be made a production unit of the Nash group immediately. A crew of Nash engineers and millwrights has been going over the plant to determine equipment requirements, and it is assumed that the Mitchell plant will be completely retooled, inasmuch as the Mitchell trustee has ordered all machinery still in the shops to be disposed of prior to March 1.

American Rubber Survey Is Not Worrying Britain

AKRON, Feb. 20—That the efforts of the United States to find new and especially American sources of crude rubber is in no way endangering the British monopoly of crude rubber and will not do so for at least seven years, if then, was the statement made to Akron industrial leaders by Ernest L. Harris, consul general at Singapore.

"British rubber growers are watching American efforts to find new rubber sources but apparently are not concerned over the venture," Mr. Harris said.

A year ago some of the large producers succeeded in having the Department of Commerce make a world-wide survey to obtain new sources of rubber which would not be subject to the British restriction laws and those proposed by the Dutch government and planters.

The results of the investigation are now being tabulated.

6,000 Chevrolets Built Monthly at Janesville

JANESVILLE, WIS., Feb. 18—The Janesville plant of the Chevrolet Motors Co. is now operating on a production basis of 6000 cars a month, which will be increased as rapidly as it is possible to bring up capacity.

The January schedule called for 5000 cars, which was completed by Jan. 28, when the works were closed down for a week to facilitate the installation of additional tools and other production units, as well as an automatic sprinkler system of fire protection throughout.

The March and April schedules, while not officially announced, contemplate production of 7000 to 8000 cars.

Dort Making Deliveries on $1,385 Utility Coupe

FLINT, MICH., Feb. 18—Dort is now making deliveries on a new low priced utility coupe selling for $1,385. Accommodations are furnished for five passengers, and there is ample space to carry packages or salesmen's samples.

A trunk is provided at the rear, and the equipment includes rain visor, cowl ventilator, drum type headlamps, gasoline gage on dash and nickeled radiator. The body is the regular type Dort coupe, with the exception that it is painted entirely black instead of blue and black.

Price Cuts Lowered Value of Tire Sales

Reductions Show Themselves in Total for Final Quarter of Last Year

NEW YORK, Feb. 18—Reports furnished by more than 230 manufacturers, representing in excess of 90 per cent of the industry, compiled by the Rubber Association of America, show the sales value of tires and tire sundries in 1923 to be $557,464,000, against $532,193,000 in 1922. Consumption of crude rubber also was greater, 217,952 tons being used in 1923, compared with 207,203 in 1922.

The first half of 1923 was better than the last six months, with the value of the product being placed at $299,726,000, as compared with $258,738,000 in the second half. In the first half, the rubber consumption was 134,556 tons, against 83,396.

Price reductions last fall show in the report of the final quarter in which the sales value of pneumatic casings was $100,251,000, against $100,707,000 in the preceding quarter, requiring 31,947 tons of crude, as compared with 27,947 in the third quarter.

Inner tubes in the final quarter required 9648 tons of rubber, in comparison with 8065 in the third quarter, the sales value being $17,175,000, against $19,263,000. Motorcycle tires, including both casings and tubes, were valued at $346,000; bicycle tires, $1,055,000; all other pneumatic casings and tubes, $45,000; solid tires for motor vehicles, $6,345,000; all other solids, $147,000, and tire sundries and repair material, $2,811,000.

The grand total sales value of all rubber products, tires, mechanical rubber goods, etc., was $883,420,000 for 1923, against $795,085,000 in 1922. Last year 274,956 tons of crude rubber were consumed, contrasted to 254,183 in 1922.

The report shows that at the end of the fourth quarter in 1923 there were 72,920 long tons on hand and 36,465 afloat.

Time Payments Planned in Building Erection

PITTSBURGH, Feb. 18—The Blaw-Knox Co. of this city announces a new plan to finance industrial buildings along the same lines of extended payments as prevails in the merchandising of automobiles. The company's plan provides not only for the financing but also the construction of the buildings themselves.

The Blaw-Knox system of construction, designed for speed in erecting and reduced cost, is that of standardized roof and wall sections which are quickly attached to shop-made steel columns and trusses. One of its features is a leak-proof skylight built into the roof sections at the shop.

Men of the Industry and What They Are Doing

Dorman with Prest-Air Corp.

S. W. Dorman, formerly vice-president and general manager of the Overseas Motor Service Corp., exporting General Motors accessories and other lines, has become general sales manager of the Prest-Air Corp. of New York City, with offices in the Grand Central Terminal Building and factory at Long Island City. The company is manufacturing the Prest-Air power bottle, charged with carbon dioxide and compressed in air form at 114 degrees below zero, which functions as an automobile jack, grease gun, tire pump and fire extinguisher. Mr. Dorman entered the industry as a Packard salesman in San Francisco in 1901, later coming east to become assistant purchasing agent of the Maxwell-Briscoe company at Tarrytown, N. Y. He joined General Motors in 1919 and since then has been most prominently identified with the export end of the automobile business.

Everitt Is Bank Director

B. F. Everitt, president of the Rickenbacker Motor Car Co., has been appointed a director of the American Loan & Trust Co., Detroit.

Taylor Succeeds Gustafson

E. A. Taylor of Detroit has been named works manager for the Yellow Sleeve-Valve Engine Works of East Moline, to succeed A. A. Gustafson. Mr. Taylor has been associated with the Maxwell, Pierce Arrow and Liberty companies.

S. S. Miller Heads Mohawk Rubber

S. S. Miller, formerly factory manager of the Mohawk Rubber Co., has succeeded R. M. Pilmore as president. Mr. Miller was formerly superintendent of the Goodyear Tire & Rubber Co. and the Kelly-Springfield Tire Co. and has been factory manager of the Mohawk company since 1912.

Climax Advances Crowley

Edward Marr Crowley of Los Angeles has been appointed sales manager of the Climax Engineering Co. He has had experience with the Climax product, having been a field man for many years.

Motor Products Names V. C. Page

V. C. Page, for the last three years sales manager of the F. A. Ames Co., Owensboro, Ky., has become associated with the Motor Products Co., Detroit, and will have charge of the development of the motor accessories division in its national distribution.

Jacobsen Sails for Europe

Birger Jacobsen, representing the Gardner and Columbia lines, sailed from New York on Feb. 16 to visit England and the countries of Northern Europe in behalf of these and other lines. Mr. Jacobsen, who will make his headquarters in Stockholm, expects to return to the United States in time to attend the International Motor Transport Congress, to be held at Detroit by the National Automobile Chamber of Commerce May 21 to 24.

Welch Visiting South America

H. S. Welch, assistant export manager of the Studebaker Co. of America, sailed from New York on Feb. 16 on a trip to South America that will take him down the East Coast and back on the West Coast, visiting the major points of automotive distribution. Mr. Welch will return to the United States, it is expected, in May.

Wood Hydraulic Promotes Frizelle

R. F. Frizelle, for three years connected with the Boston branch of the Wood Hydraulic Hoist & Body Co., has been transferred to the home office and appointed manager of the sales promotion department. Mr. Frizelle started with the old Pope Manufacturing Co. in 1904, specializing in export work. In 1912 he joined the Packard forces at Boston, remaining there until 1921, when he became affiliated with the Wood company.

Cosgrove Manages Eaton Office

E. J. Cosgrove, formerly New York representative of the Cox Brothers Manufacturing Co., has been appointed New York manager of the Eaton Axle & Spring Co., in charge of the Perfection spring service station at 616 West Fifty-sixth Street, and the Eaton bumper show rooms at 1846 Broadway.

MacNeal Goes to Chicago

Howard MacNeal, formerly of the Philadelphia plant of the Link-Belt Co., has been transferred to the Chicago plant, where he will devote his time to the promotion of portable loaders, portable belt conveyors and electric hoists. C. S. Huntington of the same company, sales engineer in charge of the sand and gravel washing division, will look after the company's interests in the cement industry, in addition to his regular duties.

Shoemaker Is Field Sales Manager

E. B. Shoemaker has been appointed field sales manager of the Bethlehem Spark Plug Co., his special mission being to place the 1,000,000 Bethelem De Luxe radiator caps, which the company plans to produce this year. Mr. Shoemaker's first work was to visit personally each of the company's forty-two district managers, which was accomplished in three weeks, four days and sixteen hours. On the same trip he also canvassed the situation as to the company's Quickway socket wrench sets and spark plugs.

Berge Consulting Engineer

Jo. Berge has resigned from the engineering staff of the A. C. Spark Plug Co. of Flint, Mich. Mr. Berge, prior to his Flint connection was with the Stewart-Warner Speedometer Corp. He will open offices in Flint as a consulting engineer.

Hawkins Will Tell Plans on Return from Vacation

DETROIT, Feb. 20—Norval A. Hawkins, former general consultant of General Motors Corp., will leave this city for a vacation trip during March, on the expiration of which, he said, plans on which he has been working will have matured and he will be prepared to announce them to the industry.

He declined to make any statement now as to what form these will take—whether he will accept offers which are known to have been made to him by several important companies in the industry, or whether he will proceed with his plans for the establishment of a general sales and advertising consulting business.

Mr. Hawkins' name has been mentioned also in conjunction with reported plans for important consolidations in the industry, but these, he said, have not advanced beyond the suggestion stage, and he declared he did not think the present time opportune for the bringing together of big companies. In the course of the next few years, he said, under changed general business conditions, mergers of the larger companies may be effected, but for the present he believes these will be confined to companies outside of the first rank.

Sales of Farm Equipment Improving in Southeast

ATLANTA, GA., Feb. 20—After two months or so of more or less inactivity farm implement and tractor sales in the Southeast have experienced a marked improvement since mid December, according to the monthly business review of the Federal Reserve Bank of Atlanta, issued in mid February. December sales volume reported by the seven larger distributors of the district show a betterment of 16.1 per cent over December, 1922, while the January volume was still better, also showing an improvement over December.

Field men covering the South for distributing firms are very optimistic over the early spring outlook, and predicting the largest volume of tractor sales in the history of the industry in the Southeast this spring. Farmers are expected to be the principal buyers, but a considerable improvement in industrial sales over last year is also anticipated. Principal improvement is in Georgia, East Tennessee and the two Carolinas.

Horizon Is Brighter for Repeal Passage

Outlook for Action on Parts and Accessories, and Possibly Trucks, Good

(*Continued from page* 480)

their legitimate share of taxation in the pending tax bill.

The National Automobile Chamber of Commerce, in a letter to each member of the House and Senate, reaffirmed the position it had taken during the hearings, asking that Congress furnish relief to the automotive taxpayers. Each Congressman was asked the direct question as to whether or not he would vote for a reduction in the automotive excise taxes.

This letter was signed by C. C. Hanch, chairman of the N. A. C. C. Legislative Committee; H. H. Rice, president, Cadillac Motor Car Co.; F. J. Haynes, president, Dodge Brothers, Inc.; George M. Graham, vice-president, Chandler Motor Car Co., and David Ludlum, president, Autocar Co.

Letter from N. A. C. C.

The letter follows:

More than two years ago, the Board of Directors of the National Automobile Chamber of Commerce, representing practically all of the motor manufacturers of America, took a strong position in opposition to the further continuance of the discriminatory war excise taxes on motor vehicles, tires, parts and accessories.

Since that time the Chamber has protested the continuance of these taxes whenever Congress has held hearings and has in every other legitimate way sought to present the inequity of these levies both to public and to their representatives in Congress.

The subject is again before you. The Ways and Means Committee has already recommended repeal of discriminatory taxes on dirks, bowling, fans, candy, telephones, movies, and similar industries amounting to about $114,000,000. We believe that it is unfair to refuse to recognize the users of 15,000,000 motor vehicles in these reductions. We believe that the present imposts are a tax both on transportation and on the misfortune of the motor users. The levy on repair parts particularly is a double tax and should be repealed.

On behalf of these users, 4,500,000 of whom are farmers, all of whom are our customers, we ask you to grant them a fair share of any reduction in war excise taxes.

Will you vote for a reduction in these levies?

Supported by National Grange

The support of the National Grange, speaking for the largest national organization of farmers, was added when the following letter was sent to each member of the house, signed by T. C. Atkeson, Washington representative:

The National Grange, the largest organization of farmers, is as you know, deeply concerned with national tax legislation. Just at this time the farmers are particularly interested in the failure of the Ways and Means Committee to properly provide for a reduction in the taxes on automobiles, trucks and repair parts.

The automobile and motor truck have become so necessary to agriculture, and to reasonably agreeable life in the country, that the best figures now indicate that one-third of the automobiles in use are owned by farmers, while the light truck is becoming indispensable to agriculture.

The tax provided for in the present law on repair parts seems to be unreasonable. It is a recurring tax and every automobile user should be relieved of it. The tax on trucks is a tax on necessary equipment, and should share in any plan of reduction in a bill when other excise taxes are being generally removed or reduced. Neither does there seem to be any tenable reason why the manufacturers' sales taxes on automobiles should not have the benefit of reasonable reductions.

I therefore wish to ask that when this matter comes before the House so far as you can do so, you will vote to eliminate the tax on repair parts and accessories, and bring about a fair reduction in the rate of taxation on motor trucks and automobiles. The National Grange generally will approve such action, I am sure.

Farm Bureau Protests

In addition to the National Grange, the American Farm Bureau Federation, also representing the farmer, has written each member of Congress as follows; the letter was signed by Gray Silver, Washington representative:

In these days of continued and extended agricultural distress reduction in taxes is one of the greatest reliefs that can be given the farmer. The Federal Government can directly serve the farmer by the removal of excise or consumption taxes. The direct saving to the farmers through lower surtaxes is almost a negligible amount, as only a very small percentage pay any surtaxes whatever.

The proposal to reduce surtaxes to 25 per cent is contrary to the best information available to us in securing the desired result, namely, adequate revenue, and we earnestly protest that it be fixed not below 40 per cent. We believe that additional revenue so raised should be equalized by the reduction of direct taxes on items such as automobile parts and light trucks, namely, those not exceeding about one ton capacity.

The tax on parts is largely in the nature of a tax on misfortune and losses and cannot well be justified at any time. In so far as the farmer is concerned the light trucks are his horse and wagon in these days of mechanical equipment and they should be freed, certainly in part if not in whole, from this tax.

Argument by Vane

C. A. Vane, general manager of the National Automobile Dealers Association, has been in Washington for the past week conferring with members of Congress, and has presented to each member a copy of the resolution adopted on Jan. 31, on the occasion of the Chicago Automobile Show, asking for the repeal of all or part of the automobile excise taxes.

Mr. Vane pointed out that a very bad situation exists among a great many of the dealers, who, because of keen competition, are taking in used cars and allowing on the transaction the amount of the excise tax. One of the chief factors from the dealer's standpoint, he stated, is that a purchaser of an automobile, after paying the factory cost, freight, insurance, carrying charge and the excise tax, figures that he has paid so much for his automobile.

Ford Plant in Chile Nearing Completion

Will Have Capacity for 5000 Cars Monthly and Will Be Operating Next Month

DETROIT, Feb. 19—Erection of a Ford Motor Co. assembly plant in Santiago, Chile, is rapidly nearing completion and is expected to be in operation in March, probably toward the end of the month. The plant will have a capacity for about 5000 cars annually, all of which will be devoted to the Chilean market, according to present plans, though further investigation of shipping possibilities may lead the company to ship from Chile into Bolivia.

The new plant for the present will be under the management of B. Kopf, who also is manager of the Montevideo branch. In addition to his management of this plant he will have jurisdiction over the sale of Ford products in Bolivia.

Regardless of whether shipments are made to Chile from the new plant or are continued from New York by way of the Panama Canal, Gibbs & Co., who have been distributors for Ford in Chile, will continue to represent the company in the several cities in which it has branches and will thus form the nucleus of the sales organization.

Materials and parts for assembly which the company has on hand will be taken over by the Ford branch on its opening. The assembly equipment was only of a minor nature and will be required by the distributors in their service departments.

General conditions for the development of automobile sales in Chile are described by the Ford company as being good. The fact that the company is establishing a branch there is evidence of its confidence in the market, it is declared, and it looks for extensive developments. Although it is the first branch of any automobile company to be established on the West Coast of South America, the Ford company feels that business can be developed that will compare with eastern coast markets.

Plants in Indianapolis Increasing Production

INDIANAPOLIS, Feb. 20—Production is increasing in automotive plants here, with Marmon, Stutz, Premier, H.C.S. and Elgin reporting advances in schedules. Body makers are very active and some of the parts makers are nearing top schedules. Automotive Parts Co. has been running nights for several weeks.

The reorganized Weidely Motors is shipping engines to customers. Robbins Body and Millspaugh & Irish have full schedules with prospects for considerable advances in business this season. Among the accessory plants, Wheeler-Schebler, Hassler and Oaks are increasing production.

Operators Tell Needs in Trucks and Buses

Greater Accessibility Necessary, They Say, to Lower Maintenance Costs

NEW YORK, Feb. 19—A message of direct interest to motor truck and passenger bus manufacturers from the operators of these vehicles crystallized out of the monthly meeting of the Metropolitan section of the Society of Automotive Engineers as the result of a paper on the subject of "When to Retire Motor Vehicles," by R. E. Plimpton of Bus Transportation. Instead of when to discontinue the use of a motor vehicle the operators were fairly generally agreed that the question most to be considered is: "What Vehicles to Purchase."

It was argued that the lack of accessibility in certain types of vehicles and the absence of standardization make it impossible to keep maintenance costs as low as they should be. Operators agreed that more cars must be taken in the selection of new equipment, and that accessibility and the consequent maintenance difficulties must be given dominant consideration in making purchases.

Some Uniform Records Kept

Not enough operators of fleets of trucks and buses, it was stated, have been keeping accurate costs for a sufficient period to give them as definite a measure on different makes of vehicles as they desire. Some of the operators have fairly uniform records covering a period of seven, eight, or as high as ten years, but changes in existing models by manufacturers are interfering with the comparisons.

Not a few representatives of large fleet operators expressed the hope that the time was near at hand when changes would be less frequent, as they not only interfered with records, but add materially to the stock of parts carried, and to the maintenance costs. Many were of the opinion that it would have been much better for some of the manufacturers to continue very satisfactory models that were built some years ago, rather than to introduce new models which have been followed by a series of improvements.

Discuss Life of Vehicle

The question of how long a truck or bus can be operated as measured by years or miles was another dominant topic, and the majority of operators were of the opinion that if an efficient inspection and maintenance system were used a vehicle could be operated a great many years, if not indefinitely. Examples were cited of vehicles purchased in 1914 today operating at 11 cents per mile less than when purchased and other examples of vehicles after five years' operation giving more than 11 per cent greater mileage per gallon of oil and as high as 235 per cent greater mileage of engine oil. These lower operating costs have been accomplished by improvements effected by the fleet operators.

The question as to whether a truck or bus should be retired as a unit vehicle or whether the component units should be individually retired established the fact that several fleet operators favor the retirement of units. The increased use of the unit repair system favors this plan.

A majority of fleet owners in the larger fleet class are collecting information on the life of different component parts. The increased life of certain parts and the reduced cost of maintenance, due to improvements, made by fleet operators, showed what can be accomplished in this regard. One large fleet has reduced the cost of chassis lubrication 35 per cent by improvements; another has lowered the repairs on brakes 60 per cent, and others have practically eliminated rear axle troubles.

Grimes Speaks in Indianapolis

INDIANAPOLIS, Feb. 16 — C. P. Grimes, research engineer of the H. H. Franklin Manufacturing Co., presented a paper dealing with recent findings on the effect of back pressure on cylinder temperature and power, and on the effects of suction yoke temperature on economy power and roughness before the Indiana Section of the Society of Engineers this week. Following the paper a lively discussion ensued that brought out many facts developed by Mr. Grimes' research work.

Dean A. A. Potter of the engineering department of Purdue opened the meeting with a talk on the problems of conducting engineering education, and the manner in which the technical schools were striving to aid industry and the proper development and conservation of natural resources for the benefit of the public.

A delegation of the Indiana Engineering Society which is having its annual meeting here attended the meeting.

POST OFFICE AWARDED TROPHY FOR AIR WORK

WASHINGTON, Feb. 20—The annual trophy of the National Aeronautical Association has been awarded the Post Office Department for having made the most notable advance in aviation during the past year.

The accomplishment upon which the award was made was the demonstration last August, when, during a five-day test, the air mail service spanned the continent twice daily in from twenty-seven to thirty hours, flying mail ships at night over a lighted pathway, 1000 miles long.

The first award in 1911 went to the Glenn H. Curtiss Aeroplane Co. for hydro-aeroplane development. The committee making the award included Orville Wright, G. W. Lewis, Frank P. Lahm, Porter H. Adams and B. Russell Shaw.

3 Colors Suggested for Traffic Signals

American Engineering Standards Committee Recommends Red, Green and Yellow

NEW YORK, Feb. 18—Red, green and yellow for primary traffic control signals and not more than three shades of any one of them is recommended by the American Engineering Standards Committee, which has been studying traffic conditions with a view to increasing safety for both drivers and pedestrians.

Charles J. Bennett, former State highway commissioner of Connecticut, is chairman of the committee which has had this work in hand. Numbered among his colleagues are Pyke Johnson of the National Automobile Chamber of Commerce; M. L. Heminway, Motor and Accessory Manufacturers Association; Harry Meixell, formerly of the Motor Vehicle Conference Committee; David Beecroft, American Automobile Association; W. A. McKay, Society of Automotive Engineers, and others whose associations are interested in bringing about needed reforms in safety signals and the like.

Exhaustive Report Due

This committee has been working diligently for some time and soon will present an exhaustive report on its progress. At the present time it feels that it has made considerable headway, as shown by a preliminary report just made. This report says in part:

Three working committees have collected and digested the information pertaining to visibility of different colors and have reached the conclusion that the experience of the railroads dare not be disregarded by using more than the three colors, of red, green and yellow, in primary traffic control signals. They will shortly formulate recommendations as to just what meaning should be assigned to each of these three colors and just what range in color vision shall be allowed to that color. In other words, how orange and red may be and still be called red, not yellow.

They have agreed that all highway signals intended for automobilists to read ought to employ the same color scheme. Whatever color is selected for the letters ought to be the same everywhere in the country. Also, whatever color is selected for background should equally be the same everywhere in the country.

Many Colors Now Used

At the present time black, white, red, yellow, blue, green, brown, etc., are in use indiscriminately for both letters and background, so that a motorist cannot tell whether or not he should observe a sign on the roadside until he has read it.

It is recommended, too, that highway traffic signs intended for pedestrians shall employ a different color scheme from those used for motorists' directions.

All these suggested colors and rules will soon be drafted into the form of a code of procedure to recommend to police and highway officials for adoption.

Renault Truck Wins Gas Producer Trials

Averages 32 Hp. for Six Hours and Consumes 15.2 Ounces of Charcoal

PARIS, Feb. 9 (*by mail*) — Renault probably will be declared the winner in the French truck competition fitted with suction gas producer plants. The trials, held by the Government Inventions Department and the Automobile Club of France, were open to 3½ and 5-ton trucks with gas producer plants burning wood or charcoal, and began with a 900 mile road test in hilly regions around Paris.

The practical tests on the road, which were satisfactory for all competitors, were followed by bench tests to determine power and consumption, and it was in this that one of the Renault engines, a four-cylinder L-head type of 100 by 160 mm. bore and stroke, averaged 32-hp. for six hours and showed the lowest consumption with 15.2 ounces of charcoal per horsepower hour.

Elaborate Filtering System

Analysis of the gas delivered to the cylinders showed that the Renault attained a purity equal to that of the best stationary gas plants, this result being due, doubtless, to the elaborate system of filtering the gas after it left the generator.

There are two cleaning operations outside the engine and two under the hood. After going through a cooler, which at the same time serves to heat the main air supply, the gas is passed through wire gauze screens and then enters a cylindrical scrubber containing three superimposed trays with metal coils soaked in oil.

Under the hood, and driven either direct from the timing gear or by means of belt, there is a centrifugal cleaner which tends to throw foreign matter onto the walls of the cylinder, from which it is carried away by water injection. The final filter is through a metal box stuffed with horsehair. Renault also makes use of an oil filter driven off the magneto shaft on his charcoal gas engines.

Dewald Had Good Results

Good results were obtained on both road and bench by a 5-ton Dewald truck using the Vierzon gas producer. In its final trials this engine, a four-cylinder of 125 by 150 mm. bore and stroke, averaged 43-hp. for six hours and burned 18 ounces of charcoal per horsepower hour. Others taking part in these trials were Delahaye, with the Etia producer, and the Gepea Co. making use of Berliet

Important developments in the use of suction gas producers for trucks and tractors may be expected in the near future, for an immense amount of experimental work is being carried out and the different concerns are completing arrangements to market their devices. In addition to the Renault plant which proved so successful in these trials, the firm has another gas producer in the experimental department which is declared to use less than 14 ounces of charcoal per horsepower hour.

Other leading firms giving attention to this problem are Panhard-Levassor, De Dion Bouton, Berliet, and Chenard & Walcker.

Industry Aids Research Studies of University

DETROIT, Feb. 19—Funds contributed by companies in the industry have made possible a number of major researches undertaken by the department of engineering research at University of Michigan since last November.

Funds by Timken Roller Bearing Co., made available a study by Prof. D. L. Rich of the physics department, on the determination and measurement of gear noises.

Prof. O. W. Boston, director of the engineering shops, has been conducting work on the art of cutting metals. Funds for this were contributed by the following companies:

Ford Motor Co., General Motors Corp., Hupp Motor Car Corp., Packard Motor Car Co., Reo Motor Car Co., Detroit Steel Products, Detroit Twist Drill Co., Michigan Screw Co., Murchey Machine Co., National Twist Drill & Foundry Co., Russell Wheel & Foundry Co., Screw Products Co., Timken-Detroit Axle Co., Detroit Copper & Brass Rolling Mills, General Manufacturing Co. and Wilton Tool Co.

Detroit Steel Products Co. contributed funds to carry out a study of laws of natural ventilation under the direction of Prof. J. E. Emswiler of the mechanical engineering department. Prof. Henry H. Higbie of the department of electrical engineering is conducting a study of the laws of natural illumination for which the Detroit Steel Products Co. has furnished the funds.

Tool Standards Work Begun in Washington

WASHINGTON, Feb. 19—Standardization of tools used in the automotive and other industries was taken up this week by Secretary of Commerce Hoover, in conference with a committee composed of 90 per cent of the manufacturers of forged tools in the United States.

Included in the conference were the following:

H. P. Sheets of Indianapolis, representing 23,000 retail hardware dealers; T. James Fernley, Philadelphia, of the National Hardware Association; James A. Donnan, Richmond, Va., Southern Hardware Association; Arthur B. Clunan, New York, National Association of Purchasing Agents; Champion Tool Co., Meadville, Pa.; Evansville Tool Works, Evansville, Ind.

Heller Bros. Co., Newark, N. J.; Hubbard & Co., Iron City Tool Works and Klein-Logan Co., Pittsburgh; Fayette R. Plumb, Philadelphia; Stanley Works, New Britain, Conn.; Warren Tool & Forge Co. of Warren, Ohio, and Warwood Tool Co., Wheeling, W. Va.

Renaults Save Time in Crossing Sahara

Make Journey in Ten Days Less Than Was Taken in Pioneer Automobile Trip

PARIS, Feb. 9 (*by mail*) — Running day and night, a convoy of three Renault six wheel automobiles has crossed the 1200 miles of the Sahara Desert from Colomb-Bechar in Southern Algeria to Bourem on the Niger in six days and is continuing down the river to British Nigeria. The cars were in charge of M. Gradis, one of the directors of the Transaharien Co., and carried Lieuts. René and Georges Estienne, Engineer Schwob of the Renault Co. and a number of mechanics.

The route is one which was proposed by Lieut. Estienne, as the result of his explorations into the Sahara Desert and proved to be faster and shorter than that followed by the first Citroen motor expedition across the desert.

The actual running time from Colomb-Bechar, the terminus point of the Algerian railroad, to Bourem on the Niger, distance 1200 miles, was 115 hours, giving an average speed of rather more than 10 m.p.h. There were only three stops en route, of respectively 2, 4 and 2 hours, bringing the total time up to 131 hours.

Started in Wrong Direction

Owing to the totally unexplored nature of the country, the convoy went off in the wrong direction from Tessalit, after covering two-thirds of the total distance, and had to return to this point after covering 250 miles and losing 44 hours. Now that the route has been mapped out, the trip across the desert could be accomplished in four and a half days.

The Renaults are those built for the use of the French Line Steamship Co. for desert journeys and have a four-cylinder engine of 70 by 120 mm. bore and stroke driving through a cone clutch and three speed gearset to dual axles fitted with twin disc wheels with 745 by 145 mm. balloon tires.

Exactly one year after the first Citroen automobile journey over the Sahara, a second expedition of three cars, in charge of Lieut. Audoin-Dubreuil, left Colomb-Bechar and reached Bourem on the Niger six days later, from which point they continued to Timbuctoo. The cars were kept going day and night and saved ten days compared with the first automobile journey over the Sahara.

FRANCE OFFERS PLANE PRIZES

PARIS, Feb. 9 (*by mail*)—Prizes totaling one million francs have been voted by the Aero Club of France for a commercial aeroplane competition to be held during August of the present year. The trials will be for multi-engine freight and passenger carrying planes only, and will consist of preliminary tests with full load and one or more engines shut off.

FINANCIAL NOTES

Michigan Securities Commission has accepted the following for filing: Ainsworth Manufacturing Co., $200,000 first mortgage 6 per cent gold bonds; Central Aluminum Corp., $1,200,000 five-year unsecured metal trust gold certificates; Detroit Aero Metals Co., $100,000 shares common stock at $1 a share; Hupp Motor Car Corp., $3,426,786 common stock at $12.50 a share; Motor City Stamping Co., $100,000 preferred stock, 10,000 shares non-par validated to be given as bonus with preferred; C. G. Spring Co., $50,000 preferred stock 500 shares non-par at $20 to be sold with preferred, and 700 shares non-par at $35 a share.

Michigan Stamping Co., which was taken over last year by the Briggs Manufacturing Co., has called for redemption March 1 of all of its preferred stock at par of $100 a share plus a premium of $5 a share. The regular quarterly dividend on preferred has been declared, payable March 1 to holders of record of Feb. 15. From and after March 1 dividend on preferred will cease and certificates thereafter will carry only surrender rights. The Union Trust Co., Detroit, has been appointed agent.

Edmunds & Jones Corp. in its consolidated income account for 1923 shows net income after charges and taxes of $450,116, equivalent, after deduction of preferred dividends, to $10.36 a share on the 40,000 shares of common stock of no par value. This compares with net income of $390,529 in 1922. The balance sheet shows assets valued at $2,534,800, including $130,916 cash, $446,787 accounts and notes receivable and $819,096 in inventories.

General Motors Corp. has declared the regular quarterly dividend of 30 cents on common, payable March 12 to stock of record Feb. 25. Regular quarterly dividends of $1.50 on the 6 per cent preferred and 6 per cent debenture and $1.75 on 7 per cent debenture stock were declared, payable May 1 to stock of record April 7.

Four Wheel Drive Auto Co. reports 1923 total sales 38 per cent better than in 1922. Its surplus at the end of the year was $893,795, while its cash on hand, with investments, outside of accounts receivable, amounted to nearly $900,000.

Sayers & Scovill Co., Cincinnati, as of Jan. 1, 1924, shows surplus and undivided profits, subject to 1923 Federal taxes, of $298,171. The grand total assets of the company amount to $978,731.

Jordan Motor Car Co.'s new stock was traded in on New York Curb, Feb. 19, for the first time, opening at 31 and closing at 30⅜.

Reynolds Spring Co. reports gross business in January of $290,000, against $250,000 in January, 1923.

New York Central Hires Trucks for Deliveries

SYRACUSE, Feb. 18—The New York Central Railroad has inaugurated motor truck service between Syracuse and points west to Rochester.

The service is being done by contract with truck owners, who furnish the vehicles and men to man them. Work is distributed on a zoning plan basis. The trucks, which leave the West Street station here every morning except Sunday, go as far as North Port Byron, stopping at freight stations along the route to receive and unload small freight. One round trip is made daily.

There is another service between Newark and North Port Bryon, and a third between Palmyra and Rochester. The service eliminates the railroad "package local" over the main line of the Syracuse division of the New York Central.

This motor transport service eliminates all way freight trains between Rochester and Syracuse. The service is independent of any existing truck lines operated by merchants between the two points and is entirely a railroad proposition, handling only railroad freight.

Similar service has been provided on the Niagara frontier by the railroad and has operated successfully for four weeks between Rochester and Lockport. The electric division of the road in the metropolitan district has also similar service.

A. A. A. Fixes Schedule for 1924 Racing Season

NEW YORK, Feb. 18—The Contest Board of the American Automobile Association has announced the schedule of speedway events for the 1924 racing season. The pilots will compete for purses totaling $240,000—$100 a mile, according to A. A. A. policy. In addition, there is $20,000 in lap prize money which Indianapolis will hang up, but which does not show in the grand total.

The schedule of dates is as follows:

April 24, 150 miles	Fresno
May 30, 500 miles	Indianapolis
June 14, 250 miles	Altoona
July 4, 250 miles	Kansas City
Sept. 1, 100 miles	Syracuse
Oct. 4, 150 miles	Fresno
Oct. 19, 250 miles	Kansas City
Nov. 24, 250 miles	Los Angeles

Boyer Enters Indianapolis Race

INDIANAPOLIS, Feb. 18—The first entry for the 500-mile race on the local speedway, scheduled for May 30, is Joe Boyer of Detroit, who is nominated to drive a Duesenberg. This is the new job Fred Duesenberg has been putting through.

Cab Owners in New York Must File Surety Bonds

WASHINGTON, Feb. 18—The United States Supreme Court h s upheld the constitutionality of the New York State law requiring public hack owners in cities of the first class to file surety bonds with the State Tax Commission.

The case on which the decision was based was that of William Henry Packard of New York City vs. Joab H. Banton, district attorney for New York County, and Charles D. Newton, State attorney general, on an appeal from the Federal Court for the Southern District of New York.

Sustaining the New York law in this way is interpreted to mean that the 18,500 taxicab owners in New York City as well as others in Rochester and Buffalo will be compelled to take out surety bonds, insuring their passengers a gainst injury.

BANK CREDITS

Written exclusively for AUTOMOTIVE INDUSTRIES *by the Guaranty Trust Co., second largest bank in America.*

Last week's developments included a further gain in general industrial activity and some improvement in wholesale and retail markets. Commodity prices eased off slightly, and stock quotations moved generally downward.

Iron and steel continue to lead the advance. The production of ingots in January, estimated on the basis of output by companies representing 95.35 per cent of the total in 1923 was 3,599,938 tons, comparing with 2,843,764 tons in December and 3,822,369 tons in January, 1923. The average daily output was 133,331 tons, representing an increase of 29,580 tons, or 26 per cent over the December average. Operations have increased further since the first of this month, and are now said to be at the rate of about 45,000,000 tons a year.

Car loadings in the week ended Feb. 2 numbered 929,936, as compared with 891,326 in the preceding week and 865,414 a year ago. The latest figure is the highest ever recorded for a similar period. Freight traffic in 1923 reached a total of 457,589,846,000 net ton miles, which is 2.3 per cent in excess of the previous record, established in 1920.

Preliminary figures of foreign trade for January show exports of $394,000,000 and imports of $299,000,000, comparing with exports of $427,000,000, and imports of $288,000,000 in December and exports of $335,000,000, and imports of $330,000,000 in January, 1923. The export balance of $95,000,000 compares with $140,000,000 in December and $6,000,000 a year ago.

Fisher's index of wholesale commodity prices stood at 154.2 last week, as against 155.2 for the preceding week and 153.4 a fortnight before. Bradstreet's food index was $3.38, comparing with $3.30 the week before and $3.36 for the week ended February 8, 1923.

Discounts Increased

Discounts by Federal Reserve banks increased $59,100,000 during the week ended Feb. 13, most of the gain being in bills secured by Government obligations. Holdings of bills bought in the open market declined $5,300,000, while Government securities rose $2,600,000. Circulation of Federal Reserve notes increased $21,800,000 and total deposits $18,600,000, while reserves fell off $13,500,000. The reserve ratio declined from 82.1 to 80.9 per cent.

Call money was slightly firmer last week, ranging between 4¼ and 5 per cent. Time loan rates were unchanged at 4½ to 4¾ per cent.

GASOLINE TAX UPHELD

WASHINGTON, Feb. 18—The Supreme Court has handed down a decision upholding the Arkansas law, taxing sales of gasoline. This is the first time that the gasoline law, adopted by many States, has been passed upon by the Supreme Court.

INDUSTRIAL NOTES

Marathon Battery Co., organized recently at Wausau, Wis., with $150,000 capital stock, has taken over a large manufacturing building in that city and is retooling it throughout for the manufacture of a general line of storage batteries and dry cells for automotive, radio and similar use. The principals in the enterprise are Edgar J. McEachron, formerly a member of the French Battery & Carbon Co. at Madison, Wis., and E. A. Fuller, mechanical engineer, until now associated with the Gisholt Machine Co. at Madison. It is expected that the new plant will be ready to commence quantity production on regular schedules not later than March 1.

A. O. Smith Corp., Milwaukee, which has been executing an important plant extension program for the past year, has placed contracts for the steel work for a number of minor additions which will make use of bays between some main buildings as well as extend others to promote efficiency of production as well as larger output of pressed steel frames, forgings, stampings and automotive equipment specialties.

Jenkins Machine Co., Sheboygan, Wis., which some time ago organized its automobile bumper and equipment department into a distinct corporation named the Steel Products Co., has let contracts for the erection of a machine shop extension which will be placed at the disposal of the new concern. Later it is planned to build additional machine shop units due to the growth of the bumper business.

Ohio Manufacturing Co., of Upper Sandusky, O., manufacturer of tractors in the past, is installing machinery and equipment for the manufacture of clutches, transmissions and cut gears. The plant is being equipped with modern machinery and a heat-treating department fitted with electric furnaces.

Packard Motor Car Co. has declared the regular quarterly dividend of 1¾ per cent on preferred, payable March 15 to stock of record Feb. 29.

Engineering Council Revises Constitution

NEW YORK, Feb. 20—A revision has been made of the constitution of the American Engineering Council affecting the administration, membership regulations, etc., of that body. What is now the American Engineering Council was formerly known as the Federated American Engineering Societies. The administrative and legislative body formerly called the American Engineering Council is now known as the Assembly. The former Executive Board is now the Administrative Board, and the Committee on Procedure has become the Executive Committee.

It is now possible for technical sections or divisions of non-technical organizations to be admitted to membership, as well as alumni associations of engineering schools and sections of non-member national societies.

The Assembly is specifically directed to communicate to the proper representatives of the National Government opinions, advice and suggestions relative to questions of legislation or administration in the solution of which engineering and allied technical knowledge and experience may be involved or valuable, and is authorized to render similar service in local or State affairs, upon request of local or State organizations or in the absence of such organizations.

The old provisions regarding the setting up of State counncils and relations to State affairs have been dropped, and membership is now restricted to organizations of the United States.

Percy Owen Starts Tour of Automotive Factories

WASHINGTON, Feb. 18—A survey of the foreign trade requirements of the American automobile manufacturers in the East will be made beginning this week by Percy Owen, now chief of the Automotive Division of the United States Department of Commerce, who is making a personal visit to practically all of the leading automobile manufacturers in New York, Michigan and Ohio. Mr. Owen will make a study particularly of what the export managers want from the United States Bureau of Foreign and Domestic Commerce.

Farm Implement Makers Deny Federal Charges

MOLINE, ILL., Feb. 16—The Moline Plow Co., the Oliver Chilled Plow Works and Deere & Co. of this city and Emerson-Brantingham Co. of Rockford, made defendants with nearly 600 principal agricultural machinery makers and local implement dealers in a complaint of conspiracy, filed by the Federal Trade Commission, to restrain trade by curtailing the supply of stock to farmers' cooperative associations, are not perturbed by the suit, which they say is of concern only to Eastern manufacturers and dealers.

The officials of the Illinois companies named in the suit deny any responsibility for the alleged violations of the commerce law. "We have never issued any orders cutting off the supply of machinery to farmers' cooperative associations," Frank Silloway, vice-president of Deere & Co., stated, and E. P. Lathrop, vice-president and legal advisor of the Emerson-Brantingham Co., said: "We have not violated any laws and have nothing to fear."

AUTOCAR HOLDS ELECTION

ARDMORE, PA., Feb. 18—Changes in personnel followed the annual meeting of the Autocar Co., when the old board of directors was reelected. Walter T. Savoye was elected a vice-president, being succeeded as treasurer by John C. Taney. Roscoe T. Anthony was elected Mr. Taney's successor as secretary and assistant treasurer. Miss Mary H. McGonigle was added to the executive staff as assistant secretary and assistant treasurer.

METAL MARKETS

Immobility of prices continues to be the outstanding feature of the market for steel products. Ordinarily so prolonged a period of stationary prices would be interpreted as denoting a perfect balancing of the scales on which supply and demand are weighed. To modified extent this condition does not prevail in the present steel market. Although a small part of production is being stocked, either by the mills in the form of semi-finished material, such as sheet bars, or by consumers and warehouses in finished form, steel absorption on the whole keeps pace with steel output.

It would be inviting a rude awakening from their dreams, however, if consumers lulled themselves into the belief that the millennium of steel market stabilization had been attained. The reason why prices show no inclination to move either up or down at this time is to be sought in the utter lack of incentive. In certain products, perhaps most notably so in sheets, a very slight increase of the current demand would suffice to bring about conditions that could only be met by a rise in prices. No indication of such an increase in the from-day-to-day demand, however, is in sight.

Likewise there are numerous products demand for which appears to be just about sufficient to keep producers going, and were this demand only slightly impaired, sellers very likely could not resist the temptation of paring prices in order to replenish their order books. The rate of business, however, keeps to a point that assures a moderate rate of operations, and makes shaving of prices as a means of obtaining more business appear inexpedient. Although sheets, especially the finished kind used in automobile bodies, have nothing in common with plates for which the demand is relatively light, there is a certain interdependence between all steel products, and there is little doubt that the backward demand for heavy rolled products has acted as a restraining factor upon a hardening of values for the lighter products of the sheet mills

In other words, the slender margin that frequently determines the advance or decline of a market is lacking. On the whole, consumers "eat up" enough steel to keep mills operating at a fairly comfortable rate, and mills turn out enough steel to keep consumers comfortably well supplied. To move prices, one must change his position to the detriment of the other. Beyond this technical situation, however, lies the structure of general economic conditions. Any change in the latter may cause steel prices to soar or sag.

Pig Iron.—Foundry and malleable pig iron is in routine demand, but no impressive sales are recorded. The market seems to be headed for somewhat more settled conditions.

Aluminum.—While the large aluminum consumers in the automotive industries are covered for the current quarter and in many instances for the first six months of the year, smaller buyers, especially parts makers, continue to be more or less interested in offerings. Resellers and remelters in the Detroit and Cleveland markets report a slight slowing off in the demand, but the prices which remelters in those centers pay for aluminum clippings (scrap) show that foundries must pay higher prices for remelted metal than those commonly quoted for virgin ingots.

Copper.—Prices for copper and brass products have responded to the betterment in the ingot market.

Calendar

FOREIGN SHOWS

March 14-23 — Geneva, International Motor Exhibition, under the auspices of La Chambre Syndicale Suisse de l' industrie Automobile.

April 2-13—Barcelona, Automobile Exposition, under the auspices of the Confederacion de Camaras Sindicales Espanolas del Automovilismo y Ciellismo, Palacio de Arte Moderno.

Aug. 23-Sept. 6—Toronto, Ont., National Automobile Show in conjunction with the Canadian National Exhibition under the sanction of the Canadian Automotive Equipment Association and the Automotive Industries of Canada.

Oct. 17-25—London, Annual Passenger Car Show, Olympia.

RACES

April 24—Fresno.

April 27—Trapani, Italy, International Automobile Race.

May 30—Indianapolis.

June 14—Altoona.

July 4—Kansas City.

Aug. 3—Lyons, France, European Grand Prix.

Sept. 1—Syracuse.

Oct. 4—Fresno.

Oct. 19—Kansas City.

Nov. 24—Los Angeles.

CONVENTIONS

March 31-April 4—New Orleans, Annual Spring Meeting of the Automotive Equipment Association.

May 19-22 — Detroit, National Automotive Service Convention and Maintenance Equipment Show, under the auspices of the Service Division of the National Automobile Chamber of Commerce, General Motors Building.

May 21-24—Detroit, International Motor Transport Congress under the auspices of the National Automobile Chamber of Commerce.

June 3-4—Detroit, Midsummer Meeting of the Automobile Body Builders Association, Hotel Statler.

June — Washington, Pan American Highway Congress, under the auspices of the Pan American Highway Mission.

Sept. 22-26—Boston, Sixth Convention and International Steel Exposition of the American Society for Steel Treating.

S. A. E. MEETINGS

March 13—Metropolitan Section, Replacement Parts and Accessories.

April 17—Metropolitan Section, Fleet Maintenance, F. W. Winchester.

May 15 — Metropolitan Section, What Roads and Steels Do to Automobiles.

Income Tax Officer Clears Vague Points

NEW YORK, Feb. 19—When the motor vehicle is used for business purposes, it is allowable to make deductions from the income tax. What reductions are permitted are explained in a statement issued by the New York office of the Collector of Internal Revenue, which endeavors to clear up vague points heretofore puzzling to owners of automobiles and trucks.

When used for business the upkeep cost may be deducted as a business expense, says the statement, but the purchase price of the vehicle may not. Neither can the purchaser deduct the 5 per cent excise tax, while in the case of a collision between a truck and a passenger car, the owner of the truck may claim a deduction for damages, whereas the owner of the car may not.

Statement of Bureau

The statement of the Internal Revenue office is as follows:

Such cost—for garage bills, gasoline, repairs, etc.—may be deducted as a business expense, when an automobile is used wholly for business purposes, or in trade, profession or farming. When used partly for such purposes and partly for pleasure or convenience of the taxpayer and his family, the cost may be prorated and that part attributable to business or the other pursuits mentioned deducted as a business expense.

The same rule applies to the deduction for depreciation, which is allowed when used wholly in business, trade, profession or farming, and must be apportioned accordingly when used partly for such purposes and partly for pleasure. If an automobile is used almost exclusively for pleasure, a deduction for depreciation is not allowed.

The purchase price of an automobile, even when used wholly in business cannot be deducted from gross income. It is a capital expenditure, deduction of which is expressly disallowed by the revenue act. The 5 per cent tax which attaches to the sale of an automobile cannot be deducted by the purchaser because it is a tax levied on the sale by the manufacturer and must be returned and paid by him. The manufacturer may reimburse himself in the amount of the tax by agreement with the purchaser, in manner prescribed by the Treasury regulations. So far as the purchaser is concerned, the tax is a part of the cost to him of the automobile. The manufacturer may not deduct the tax in his return, unless the amount is included in his gross income.

An automobile license fee is regarded as a tax and may be deducted whether the automobile is used for business or for pleasure or for convenience.

In the event of a collision between a truck and an automobile used for pleasure or convenience, the owner of the truck may claim a deduction for damages, providing the truck was being used for business purposes. Amounts expended by owners of automobiles used for pleasure or convenience in repairing damages thereto caused by negligent operation do not constitute deductible losses.

Reserve Board Reports on Industry's Activity

WASHINGTON, Feb. 18—Automobile manufacturers are preparing for continued large output and sales, Federal Reserve Board is informed by its member banks scattered throughout the country. In commenting on the outlook for the automobile industry, the Board makes the following summary:

Automobile shows held during January indicate the increasing popularity of closed models. Production and shipments of cars during December, although seasonally less than in November, were well maintained at a level one-third higher than that of a year previous. December truck production was only slightly smaller than the November output.

Statistics collected by the Federal Reserve Bank of Chicago from fifty-five distributors and dealers in the Middle West showed increases during December in the number of cars sold at both wholesale and retail as compared with November. Wholesalers reported decreases as compared with December, 1922. Stocks of both new and used cars on hand continued to increase and were larger than a year ago.

Everywhere manufacturers reported their most active year and state they are now preparing for continued large output and sales.

Reports from rubber tire manufacturers indicate enlarged production and shipment of pneumatic casings during December, accompanied by a decrease in stocks to the lowest point since January, 1922. Shipments of inner tubes and solid tires were also larger, whereas production changed but slightly.

Smallest Cars Enter French Race in July

PARIS, Feb. 9 (*by mail*) — With a piston displacement limited to 30½ cu. in., the French Cycle Car Grand Prix, to be held at Lyons on July 30, will witness the appearance in a road race of the smallest two-passenger automobiles in the world, having an engine which until quite recently was considered hardly sufficient for a motor cycle.

The minimum weight for these baby racers is 386 lb. There will be a second class for two-seater cars of 45½ cu. in., with a weight limit of 551 lb.

The 61 cu. in. cycle car racing class, which has prevailed for a number of years, has been abolished on the ground that these light machines have become so fast that they are dangerous. The 61 cu. in. class is maintained for touring events.

A 21.3 cu. in. two-passenger racing car class has been established in France, but it is not intended to admit these in the cycle car speed test at Lyons.

Four classes of motorcycles, having piston displacement limits of 175, 250, 350 and 500 cc., will be run in the French Motorcycle Grand Prix road race at Lyons. Both the motorcycle and the cycle car races form part of the program of the big meeting at Lyons which will terminate on Aug. 3.

Belgium Proposes Law Covering Import Duty

PARIS, Feb. 9 (*by mail*) — Import duties on the basis of 160 francs per 100 kilogrammes, multiplied by the coefficients of 2.6, 3.1 and 3.7 according to the three classes into which chassis and complete cars will be divided, form the basis of a law which is now before the Belgian Government.

The proposal to come to an agreement with the French Government whereby the French duty on Belgian cars would be dropped from 45 to 30 per cent has had to be dropped, and as a consequence of this break the Belgian Government has brought forward the specific import duties mentioned above.